



CITY AND COUNTY OF BRISTOL.

---

# ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1930.



1930.

CITY AND COUNTY OF BRISTOL.

# ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH.

---

R. H. PARRY, M.B., B.S. Lond., D.P.H.

*Principal Officer of the Medical Services of the City and Port of Bristol. Medical Officer of Health and School Medical Officer. General Med. Supt. of the City Hospitals and Sanatoria. Lecturer in Charge of the Public Health Department and Internal Examiner in Public Health, University of Bristol.*





## CONSTITUTION OF COMMITTEES.

The Lord Mayor :  
F. F. CLOTHIER, Esq., J.P.

### Health Committee.

*Chairman :*

Alderman H. J. Maggs, J.P.

*Vice-Chairman :*

Alderman J. E. Jones, J.P.

Alderman	J. J. Milton, J.P.
Councillor	E. J. Ball, M.R.C.S., L.R.C.P.
"	L. H. Bateman
"	W. H. Byrt, J.P.
"	E. T. Cozens, J.P.
"	W. Dancy
"	A. V. Despres
"	H. S. Evans
"	H. R. Griffiths
"	Miss L. Meade-King
"	J. Owen
"	J. Priscott
"	Mrs. E. S. Robinson-White, J.P.
"	H. Stallard
"	Sir L. A. Goodenough Taylor
"	F. E. White
"	H. A. White
"	T. J. Wise

### Housing Committee.

*Chairman :*

Alderman F. Sheppard, J.P.

*Vice-Chairman :*

Alderman J. E. Jones, J.P.

Alderman	H. F. Cotterell, J.P.
Councillor	C. S. Baston
"	W. Bryant
"	G. Daniel
"	C. R. Gill
"	F. E. C. Habgood
"	A. G. Heard
"	G. S. James
"	T. Jefferis
"	H. R. Lee
"	A. L. H. Smith
"	H. A. White
"	T. J. Wise

### Mental Deficiency Act Committee.

*Chairman :*

Alderman F. Sheppard, J.P.

*Vice-Chairman :*

Miss F. M. Townsend, J.P.

Alderman	F. G. Mullis
Councillor	W. H. Byrt, J.P.
"	H. J. Cridland
"	R. G. Cunningham
"	T. Jefferis
"	M. Giles, J.P.
"	A. F. Moon
"	H. E. Rogers
<hr style="width: 20%; margin: 5px auto;"/>	
	Monsignor Lee
	Mr. F. W. Phillips
	Mrs. G. H. Brown
	Mrs. A. W. S. Burgess

*The Town Clerk :* Josiah Green, Esq.

The full *Health Committee* is also the :—

Health (Accounts and Contracts) Committee  
General Purposes Sub-Committee  
Maternity and Child Welfare Committee

The full *Housing Committee* is also the :—

Housing of the Working Classes Committee.

## Other Health Sub-Committees—

---

### Port Sanitary Sub-Committee.

Alderman J. E. Jones, J.P. (*Chairman*).  
 Alderman H. J. Maggs, J.P.  
 Councillor E. T. Cozens, J.P.  
 „ A. V. Despres  
 „ J. Owen  
 „ J. Priscott  
 „ Sir. L. Goodenough Taylor  
 „ H. A. White  
 „ T. J. Wise

### Farms & Gardens Sub-Committee.

Councillor T. J. Wise (*Chairman*).  
 Alderman H. J. Maggs, J.P.  
 Alderman J. E. Jones, J.P.  
 Councillor Dr. E. J. Ball  
 „ H. S. Evans  
 „ J. Owen  
 „ J. Priscott  
 „ F. E. White  
 „ H. A. White

### Public Health Institutions Sub-Committee.

Alderman H. J. Maggs, J.P. ( <i>Chairman</i> )	Councillor A. V. Despres
„ J. J. Milton, J.P.	„ H. R. Griffiths
„ J. E. Jones, J.P.	„ Miss Meade-King
Councillor L. H. Bateman	„ H. Stallard
„ W. H. Byrt, J.P.	„ Sir L. Goodenough Taylor
„ E. T. Cozens, J.P.	„ Mrs. Robinson-White, J.P.
„ W. Dancy	

### Nursing Homes Sub-Committee.

Alderman H. J. Maggs, J.P. (*Chairman*)  
 „ J. J. Milton, J.P.  
 „ J. E. Jones, J.P.  
 Councillor E. T. Cozens, J.P.  
 „ Mrs. Robinson-White, J.P.

### Assessment Sub-Committee.

Councillor Miss Meade-King  
(*Chairman*)  
 Alderman H. J. Maggs, J.P.  
 „ J. J. Milton, J.P.  
 „ J. E. Jones, J.P.  
 Councillor J. Owen  
 „ H. Stallard  
 „ F. E. White

### Establishment of Fish Frying Businesses Sub-Committee.

Alderman J. E. Jones, J.P. (*Chairman*)  
 „ H. J. Maggs, J.P.  
 Councillor W. Dancy  
 „ J. Priscott  
 „ F. E. White  
 „ H. A. White

### Staff Sub-Committee.

Alderman H. J. Maggs, J.P. (*Chairman*).  
 „ J. E. Jones, J.P.  
 Councillor J. Owen

## STAFF OF THE PUBLIC HEALTH DEPARTMENT.

(Note :—Further details concerning staffs of various sections will be found at the commencement of the particular section).

### Medical Officers.

Medical officer of health (city and port) and school medical officer	... ..	} R. H. Parry, M.B., B.S. (Lond.), D.P.H.
Deputy medical officer of health	A. G. Morison, M.A., M.D., D.P.H.	

### Chief Assistant Medical officers—special sections.

Tuberculosis officer	... ..	C. J. Campbell Faill, F.R.C.P., Ed.
Maternity and child welfare	... ..	M. G. Hughes, M.B., Ch. B.
School medical service	... ..	A. A. Dalby, M.C., M.R.C.S., L.R.C.P.

### Residents Medical Superintendents.

Ham Green Hospital & Sanatorium	B. A. I. Peters, B.A., M.D., D.P.H.
Southmead Hospital	... .. P. Phillips, M.Sc., M.B., Ch. B.
Frenehay Park Sanatorium	... .. K. H. Pridie, M.B., B.S., F.R.C.S., Eng.

### Specialists and other Medical Officers (part time).

Consultant surgeon (Orthopaedic)	G. R. Girdlestone, M.A., F.R.C.S., Eng.
Surgeon (Orthopaedic) ... ..	H. Chitty, M.S., F.R.C.S., Eng.
Surgeon (Ear, Nose and Throat diseases) ... ..	} G. R. Searff, M.B., Ch. B., F.R.C.S., Ed.
Surgeon (Eye diseases) ... ..	
	R. R. Garden, M.A., M.B., D.O.M.S., D.P.H.
Radiologist (Frenehay Park) ...	T. B. Wansbrough, M.B., Ch.B.
Pathologist ... ..	I. Walker Hall, M.D.
Director of venereal disease clinic	S. Hardy Kingston, M.B., Ch.B., D.P.H.
Public vaccinators ... ..	J. A. L. Roberts, M.B., B.S., (full-time)
„ „ ... ..	seven part-time
District medical officers, poor law	} J. A. L. Roberts, M.B., B.S. (full-time with above appointment) six part-time
Certifying medical officers, M.D. Act ... ..	
	three

### Other Officers.

Public analyst	... .. E. Russell, B.Sc., Lond., F.I.C., F.C.S.
Veterinary surgeon (part-time)...	G. E. Henson, M.R.C.V.S.
Chief sanitary inspector	... .. J. A. Robinson, F.S.I.A.
Superintendent sanitary inspector	T. J. Crofts, F.S.I.A.
Chief housing inspector...	... .. A. W. Griffiths, Cert. Building Construction, &c., M.S.I.A.
Chief clerk...	... .. C. W. M. Vincent
Second clerk	... .. J. G. Watson
Principal sister	... .. Miss L. Elkins
(also superintendent school nurse)	
Supervising officer, Mental Deficiency Act	... .. } W. E. Price

## CONTENTS.

---

	PAGES
GENERAL SUMMARY AND INTRODUCTION ... ..	1-14
STATISTICS AND SOCIAL CONDITIONS OF THE AREA ... ..	15-38
GENERAL PROVISION OF HEALTH SERVICES ... ..	39-53
MATERNITY AND CHILD WELFARE ... ..	54-69
SANITARY CIRCUMSTANCES ... ..	70-79
HOUSING ... ..	80-84
INSPECTION AND SUPERVISION OF FOOD ... ..	85-97
PREVALENCE AND CONTROL OVER INFECTIOUS AND OTHER DISEASES ... ..	98-131
CITY HOSPITALS, SANATORIA, ETC ... ..	132-146
VENEREAL DISEASES ... ..	147-150
APPENDIX ... ..	151-162

## CITY AND COUNTY OF BRISTOL.

### ANNUAL REPORT, 1930.

*My Lord Mayor, Ladies and Gentlemen—*

I have the honour to submit my first annual report on the health and sanitary circumstances of the city.

On the 31st of May, 1930, Dr. R. A. Askins, who had served the city for over fifteen years, first as school medical officer and later as medical officer of health, relinquished the post of medical officer of health on his appointment as principal medical officer to the government of Southern Rhodesia, and I commenced duty on June 1st.

During 1930 the boundaries of the city were extended and 1,000 acres (approximately) were added to the city of Bristol.

The unemployment figures were high but on the whole the city suffered less than many large cities from the great industrial depression which existed throughout the country generally.

#### **Births.**

[see pages 22–23].

The birth rate was higher by 0.15 per 1,000 population than in the previous year, there being 62 more births than in 1929. An interesting fact is demonstrated by comparing the marriage rate curve and the birth rate curve during the last 10 years on page 24. Up to 1926 the marriage rate appeared to be falling steadily and the birth rate appeared to keep pace with it. During the last four years the curves have taken opposite directions. Whilst the marriage curve has been ascending steadily to the level it occupied ten years ago, the birth rate, although slightly higher last year, on the whole has inclined downwards. Marriages certainly are not as fertile as they were ten years ago, and one is led to believe that contraception is playing some part in lowering the birth rate.

#### **Deaths.**

[see pages 25–38].

The general death rate was 11.59 per 1,000 of the population as compared with 12.93 in 1929 when the figure was unusually high on account of an epidemic of influenza. The two outstanding features in regard to the causes of death were :—

(a) A further rise occurred in the death rate for cancer. Compared with 1920 this rate has increased from 1.14 to 1.52 per 1,000 of the population and ~~21~~ more deaths were certified last year from <sup>62</sup> the disease than was the case ten years ago. As the result of recent research one fact emerges clearly—that cancer in its early stages is a curable disease. Pending the discovery of specific measures for controlling cancer, it is of the utmost importance to consider whether everything possible is being done to check its onslaught on human life. To what extent in Bristol are patients subjected to treatment whilst the disease is yet curable? One cannot dissociate long waiting lists for admission into hospitals and the



general scarcity of institutional beds from a high death rate from cancer. Delay in securing appropriate early treatment may, in fact, convert an operable into an inoperable condition. Indeed, it is not generally realised that this disease spreads through the blood or the lymph channels into other parts of the body whence eradication is impossible and that this process may occur within a very short time. It would be a great asset to the city to have empty institutional beds always available for the early diagnosis (as distinct from treatment) of disease in general. This is the basis of a truly preventive service.

(b) An epidemic of measles which extended well into 1931 caused 113 deaths, all under 15 years and mostly under 3 years old. Two years ago a similar epidemic occurred and caused 99 deaths. This is further discussed on pages 3 and 113.

### **Prevalence and control of infectious diseases.**

#### *Diphtheria.*

[see pages 98–115].

This disease was particularly prevalent during 1930, especially during the first quarter of the year, 1,484 cases being notified as suffering from the disease, which gives a case rate of 3.8 per 1,000 of the population. Of this number 1,374 were admitted to Ham Green Hospital, the largest number ever admitted. The disease was of a very severe type. There were 41 deaths in the city, giving a fatality rate of 2.8 per cent. This low fatality rate is very gratifying, and in my opinion is definitely attributable to a form of treatment discovered and introduced into Ham Green Hospital by Dr. Peters. The case mortality rate in the hospital after the introduction of this treatment was only 2.3 per cent, which is less than half the rate for the preceding year, in spite of the fact that the disease was more severe.

In view of the importance of the administration of serum early in the disease, free supplies have been made easily available to medical practitioners and the use made of this facility has been, so far, excellent. In the 41 deaths, however, 29 had not received serum treatment before admission to hospital. Again, delay in summoning a doctor is another factor at work. For instance, 35 had been ill one day or more before a doctor was called in and 19 had been ill two or more days, so that their chance of recovery was small.

Immunisation against diphtheria was carried on during 1930, in schools by the school medical staff, in an infant welfare clinic by the medical officers of the maternity and child welfare section, and in the city hospitals. Altogether 6,524 children received the full course of immunising inoculation. In the absence of the disease it is extremely difficult to convince parents of the importance of the preventive measure. The insufficient protection afforded to some cases by a full course is not likely to strengthen the case for immunisation. This is further dealt with on pages 106–9.

It is estimated that institutional treatment for this disease alone cost the city in 1930 about £20,700. Assuming that an ordinary full immunising course costs approximately 4/- and that 50 per cent. of the children are immunised with one course and 50 per cent. require two complete courses, it is possible to immunise the child population (there are approximately 58,000 children under

15 years) of the city for several years for less than it cost last year to treat the disease. In addition there were 41 deaths, and much suffering, most of which no doubt could have been avoided.

### *Measles.*

This disease was particularly prevalent during the last quarter of 1930. It is not a notifiable disease but the health department became aware of the existence of 4,042 cases during the year and 52 deaths were certified. Arrangements were made for the admission of a limited number of cases from unsuitable homes to Ham Green Hospital, and altogether 187 cases were admitted, with 14 deaths. In his report Dr. Peters draws special attention to some interesting facts concerning the nursing of measles (page 133).

### *Tuberculosis.*

[see pages 116–126].

The number of notifications and deaths from tuberculosis were less than in 1929. It will be seen from the table on page 117 that the number of notifications have decreased considerably in recent years (40 per cent. since 1920), and this decrease has been steady. This is true for both pulmonary and other forms of tuberculosis. In the case of pulmonary tuberculosis, the fall has been mostly for the ages of 25–45, whereas in the non-pulmonary, the most marked fall has been for ages 5–15. The number of deaths from the pulmonary disease, however, remains the same, a fact which may be accounted for in one of two ways:—

- (a) that the disease is not so prevalent, but still as virulent.
- (b) that notification is not efficiently carried out.

To consider the facts in more detail—it will be noted that for the pulmonary disease the ratio of non-notified deaths to notified deaths (1.13) is still high. In 1929 the ratio was still higher (1.9) probably because of the influenza epidemic during the early part of the year. Dr. Peters in his report on Ham Green Sanatorium points out that patients are admitted to the sanatorium increasingly late in the course of the disease. These facts seem to indicate that a considerable proportion of cases suffering from pulmonary tuberculosis are only notified when the disease is well advanced and consequently notification is no true guide to the department of the prevalence of the disease, especially when in its early stages. Indeed it is doubtful whether the number of notifications ever will be a reliable guide until some provision is made for the proper after-care of the patient and of his family on the lines indicated by the chief medical officer of the Ministry of Health in his report for 1929. In this connection it is significant that the decrease in the number of pulmonary notifications has been at the ages 25–45, whereas for non-pulmonary tuberculosis, the decrease in notifications was for the ages 5–15 years. This latter fact is in agreement with the general tendency of non-pulmonary tuberculosis during the last ten years, whereby the prevalence of (as indicated by notification) and deaths from the disease have dropped by 30 per cent.

The foundation of an efficient tuberculosis scheme must be the tuberculosis officer and his municipal dispensaries. In Bristol the two dispensaries are situated within a mile and a half of each

other and both are old converted houses. The Health Committee is not satisfied with the facilities offered at these dispensaries for the diagnosis of tuberculosis, and have under consideration their re-establishment in association with other municipal health activities in a central clinic. In this way the clinical medical officers will have available modern and efficient aids to diagnosis.

A further factor of great importance to the efficient working of a tuberculosis scheme is the need for proper classification of the cases before they are sent into institutions. It is, of course, an accepted and important fact that not all tuberculous patients require the same regime of treatment. By proper classification it will be possible to utilise the institutional beds available to the best advantage—for the health of the patient and economy to the city. For this purpose of classification the tuberculosis officer must have at his disposal a limited number of observation beds and it is hoped that soon it will be possible to arrange such provision at the municipal hospital.

### **Laboratory facilities.**

[see pages 40–41].

Laboratory facilities in the city are receiving the serious consideration of the Health Committee. At present the distribution of the laboratory work is found to be a great disadvantage to the department. Besides, there is need for a more elastic service to meet a growing demand.

The importance of efficient bacteriological and pathological services to preventive medicine cannot be over estimated. Correct and early diagnosis of disease must always form the foundation for successful treatment and the prevention of further spread. Laboratory facilities are of the first importance in this connection. Well equipped laboratories with medical men specially skilled in this branch of the science and working in close co-operation with the other branches of the medical services—all these factors are necessary if the citizens of Bristol are to receive the full benefit from their medical services. The Health Committee is fully alive to the importance of this particular branch of the service.

### **Hospitals.**

[see pages 42–45].

In the city of Bristol there are no less than ten hospitals supported by voluntary contributions to meet the needs of the city in regard to medical, surgical, maternity, orthopaedic and eye diseases. In addition, the Council provides two hospitals for these purposes. Nevertheless there is a distinct shortage of institutional beds for various purposes, and patients suffering from definite diseases have to wait before treatment can be made available to them. It is the essence of preventive medicine that every person, rich or poor, suffering from any disease, shall have treatment at the earliest possible moment. Upon early diagnosis depends prevention as well as successful treatment of disease. There is a modern conception of a hospital as a place where all the facilities for early and quick diagnosis are at hand. It must always be, however, that a case requiring hospital treatment for active disease, shall have precedence and where 'waiting lists' of such cases exist a case for diagnosis naturally has to wait, and whilst waiting frequently becomes a case requiring urgent treatment. The Bristol Hospitals Council on which are represented all the medical



institutions (including municipal) of the city is giving serious consideration to the problem of co-ordinating the work of the hospitals in the area and is to be congratulated upon the effort being made to bring about co-ordination between the various institutions. The Hospitals Council has been recognised by the Health Committee in accordance with section 13 of the Local Government Act, 1929, and matters relative to institutional accommodation in the city generally are discussed by the Health Committee and the Hospitals Council.

*Ham Green Hospital and Sanatorium.* [see pages 132-137].

In another part of the report reference is made to the excellent work performed by Dr. Peters and his staff. During the year, an additional assistant medical officer was appointed; this became necessary because Novers Hill Hospital was handed over to the care of the Ham Green Superintendent as an auxiliary hospital for the treatment of infectious diseases.

When Southmead Hospital was appropriated by the Health Committee it was realised that a substantial number of cases were treated in that institution for such diseases as chickenpox, measles, whooping cough, etc. The Health Committee decided that wherever possible these cases should be treated at Ham Green, but it soon became apparent that the accommodation at this institution was quite insufficient for the purpose, and so, in the absence of smallpox, use was made for this purpose of the smallpox hospital at Novers Hill. In spite of this additional accommodation it was necessary to nurse 104 cases during the year at Southmead. This is far from satisfactory, and the Health Committee will be faced at an early date with the need for increasing the accommodation available for infectious diseases.

With regard to the sanatorium, the temporary blocks have become worn out and it is doubtful whether the buildings can be utilised much longer. The committee is giving the matter its serious consideration.

*Southmead Hospital.* [see pages 138-143].

This institution was appropriated on the 1st April, 1930, in accordance with the provisions of the Local Government Act 1929, for the treatment of the sick under the Public Health Acts. It has not been possible to make as much progress as one would like, in the development of this institution as a general hospital, on account of the lack of accommodation. Some 200 patients in the institution are of the chronic sick type and really do not require hospital treatment as such, but should be nursed under the supervision of skilled nurses in a nursing home. A special sub-committee was appointed to consider the question of the accommodation of the chronic sick in the city including the provisions for their maintenance already existing at the public assistance institution at Eastville, and having regard to the powers conferred by section 62 of the Bristol Corporation (No. 2) Act, 1930, for removal into suitable institutions of

(a) Aged or infirm or physically incapacitated persons residing in premises which are insanitary, or under insanitary conditions,

or

(b) of persons suffering from any grave chronic disease.

A complete scheme has been prepared which will give immense relief to overcrowded institutions, and this is receiving the careful consideration of the Health Committee.

One of the first problems which presented itself to the Health Committee when it took over the institution was the question of admission into hospital and repayment for the cost of treatment. With regard to tuberculosis and maternity cases, both declared services, the procedure was quite clear.

All tubercular cases which are admitted into any of the institutions pass through the hands of the tuberculosis officer who is responsible for classification. Maternity cases are admitted direct through the medical superintendent or through the health office. With regard to outside city cases, an arrangement has been reached with Gloucestershire, whereby the latter become responsible for maternity cases which are admitted as emergencies, provided due notice is given to the authority concerned as soon as possible after admission. Other cases from the area may be admitted by arrangement. With regard to Somerset, it is to be regretted that no satisfactory agreement can be arrived at, and patients from the latter county are instructed to get in touch with their own local authority.

Patients suffering from other diseases apply through their private doctors for admission and are admitted direct as far as accommodation is available, and treated as Health Committee cases. A certain number, however, find their way into the institution through the machinery of the poor law, and the Public Assistance Committee becomes responsible for the cost of maintenance of these patients, as well as for those cases admitted as emergencies domiciled outside the city.

For the purposes of assessment for repayment for medical services, a special assessment sub-committee of the Health Committee has been formed to deal with all cases receiving medical assistance under the public health acts, but unable to afford the full cost thereof. The city treasurer is responsible for all the collections.

An attempt is being made to classify the cases in the institution. As already mentioned, this will not be completely satisfactory until accommodation is found for the chronic sick. With regard to the orthopaedic cases there are about 41 in Southmead Hospital. Some of these cases have found their way into the institution because they are destitute and this in its turn has been the direct result of an injury which has not responded to the treatment given. Others have been transferred from the voluntary hospitals after preliminary treatment only. It became obvious that some scheme for dealing with all orthopaedic cases in the city was essential. The Health Committee considered the problem from all angles and decided to appoint Mr. Hey Groves, surgeon at the General Hospital and professor of surgery to the University, and Mr. Chitty, surgeon to the Bristol Royal Infirmary as well as orthopaedic surgeon to the Health and Education Committees, to be orthopaedic surgeons on the staff of Southmead Hospital. In addition the resident medical superintendent at Frenchay Park was appointed assistant orthopaedic surgeon. These officers commenced duties early in 1931 and it is hoped before the end of the year that definite provision will be made for an up-to-date orthopaedic clinic in the institution to co-ordinate all the orthopaedic work of the city.

## Research.

Dr. Peters in his report draws attention to the enormous amount of invaluable material at the disposal of the staff for research purposes. This is true of all branches of the municipal health service. In the past, medical research has almost entirely been considered as a side-line dependent upon charity, but it is pleasing to note the increased interest taken by the local authority in medical research. One hopes that during the next few years progress will be made in this direction by the local authority. Of the value of research when entrusted to suitable persons there is little doubt. An excellent example is found in the discovery by Dr. Peters of a new form of treatment for diphtheria, which has resulted during 1930 in the halving of the fatality rate of diphtheria in the institution.

## Maternity and child welfare.

[see pages 54-69].

Further progress has been made in the development of this section for the care and supervision of the mother and child. Towards the end of the year arrangements were made for the appointment of an additional full-time medical assistant to the department to meet the increased work caused by adding more sessions to clinics already existing, and the opening of two new clinics. In the attempt to co-ordinate the medical services both on the part of the Education and the Health Committees it was decided to establish a joint clinic at Southmead Hospital which is situated between two large housing estates. Two sessions were arranged for ante-natal work which have already started, and one session for infant welfare work. The opening at this joint clinic of a session for the treatment of minor ailments for under fives and school children, as well as an inspection clinic for the latter have been delayed through lack of staff, although the clinic itself is fully equipped for the purpose. It is hoped, however, that this difficulty will be overcome before the end of 1931.

## *Mothercraft clinic.*

[see pages 62-63].

This is one of the most successful clinics. Advice is given concerning infant feeding and large numbers of infants suffering as the result of wrong or mismanaged feeding attend the clinic. Much good work has been done especially in educating mothers as to the value of breast-feeding. Four sessions are devoted every week to this work. One health visitor has been specially trained for this work and devotes her full time to it. She attends the clinics, pays special visits to the homes and gives lectures at infant welfare centres.

## *Artificial sunlight treatment.*

[see page 62].

Another year's experience of artificial sunlight treatment confirms the previous impression that for certain types of cases this form of treatment acts as an excellent 'tonic.' Dr. Faill gives a detailed report on page 122 of the results obtained in tuberculous cases.

## *Dental treatment.*

[see page 64].

There is evidence that expectant and nursing mothers every year show greater appreciation of the value of dental treatment. This



has resulted in an added expenditure amounting to approximately £170, but it is certain that the value obtained by the mother and child is far greater than this sum indicates.

*Training course for health visitors.*

[see page 65].

During the year the Health Committee reviewed the scale of salaries for health visitors. For the salary then offered—£160 to £190—it was impossible to obtain properly qualified candidates, and the Council decided that the post should in future be advertised at a salary of £200 to £220 for health visitors possessing the new health visitors' certificate.

A course which was started a year ago, in conjunction with the University, has now been re-organised into a full-time course of six months' duration. The Health Committee appoint a limited number of pupil health visitors at a salary of £100 per annum. Large numbers of applicants for these posts have already been obtained, and it is hoped that this arrangement, together with the better conditions of pay, will ensure a sufficient supply of efficient health visitors for the city.

*Transferred services.*

[see pages 53 & 65–69].

The Infant Life Protection Act and part of the Children's Act, 1908, has been operated by the staff of this section as from the 1st April. In addition, the section is responsible for all boarded-out children and the Children's Homes, the Health Committee's work being subject to the "general direction and control of the Public Assistance Committee." A full report has been submitted to the committee on the Children's Homes and this is still under consideration by a joint sub-committee of the Health and Public Assistance Committees.

*Medical staff.*

[see page 54].

As already mentioned, provision was made during the year for an additional full-time assistant medical officer, and the appointment has now been made. It is essential that if full-time medical officers shall retain their interest in the maternity branch of the work as well as maintain their efficiency, they shall be kept in close touch with the practical aspect as seen in institutions. With the appropriation of Southmead Hospital and the development of its maternity department it is hoped that arrangements can be made so that medical officers working in the maternity and child welfare section shall be able to attend hospital practice for a certain period every year as residents.

One cannot but feel satisfaction with the excellent work which has been done by this section during the year. Much still remains to be done and no doubt will be done, for this work is in the nature of an investment and the best investment that the city of Bristol can make.

**Venereal disease clinic.**

[see pages 147–150].

Three years' experience have now been obtained in regard to the working of a single whole-time clinic, which is associated with the Bristol Royal Infirmary. Whilst this arrangement has much to be said in its favour, there are extensions which should be made and these demand early attention.

(1) The contact between this clinic and the municipal ante-natal clinics is not close. The medical officers in charge of the ante-natal clinics frequently report that it is not possible to obtain attendance of patients referred to the special clinic, with the result that sometimes a patient is lost sight of until the confinement and of course remains untreated. It does appear that the only solution to this difficulty is the establishment of a clinic in connection with the central clinic, so that if a patient is referred from an ante-natal clinic to the central clinic for further investigation, no mention need be made of the disease.

(2) There is definite need of a system for following up contacts especially in regard to women and children. By bringing this work into closer touch with maternity and child welfare and utilising the services of health visitors it will be possible to add considerably to the value and efficiency of the service.

(3) Most of the chronic venereal cases find their way into Southmead Hospital and facilities have now been made for the admission of venereal pregnant women to that institution, yet there is no liaison between the hospital and the municipal scheme for treatment of venereal disease.

### **Mental deficiency.**

Towards the end of 1930, all domiciliary work connected with mental deficiency and the supervising officer and his staff were placed under the control of the medical officer of health. The position in regard to mental deficiency is dealt with fully in the report on page 47. It is hoped that the decision of the Council mentioned above will result in close co-operation between the school medical officer's department and the Mental Deficiency Act Committee, and in better ascertainment. In addition it becomes more clear daily that mental deficiency is essentially a public health problem, and must not remain an isolated service.

### **Mental Treatment Act, 1930.**

The Council has decided that the Mental Hospitals Committee shall be responsible for the administration of this Act in so far as it relates to mental illness. At one time it was hoped that a clinic would be arranged at the municipal hospital and a close link thus formed with the health department, but this has not matured.

### **Prevention of blindness.**

[see pages 127-131].

During the year the medical officer of health was appointed inspector, on behalf of the Council, of the voluntary organisations in the city responsible for the welfare of the blind. A report was submitted to the Blind Persons Act Committee, pointing out the need for the establishment of a panel of two ophthalmic specialists to which all cases applying for assistance under the Act should be referred. The intention of this recommendation was that—

- (a) no cases should be admitted on to the blind register unless the person was actually blind within the meaning of the Act.
- (b) no person should be turned away if he was blind within the meaning of the Act.

- (c) such a panel attending at a clinic would be a valuable method of ascertainment of eye diseases which would be amenable to treatment.

The committee unanimously adopted the suggestions made. The scheme is at present in full working order but as yet it is too soon to estimate the full value of the benefit received from its operation.

### **Food supplies.**

[see pages 85-97].

Inspection and supervision of the food supplies of the city form a most essential part of the work of the department.

The duties in relation to this work are becoming more numerous and demanding more skill and specialisation every year. This is especially true in regard to the enforcement of such Acts as the Merchandise Marks Act, 1926, and the Agricultural Products (Marking and Grading) Act, 1928.

It is indeed surprising that in 1930 so much of the officers' time should be spent in efforts to expose intentional acts to supply the public with food of inferior quality. Yet such is the case, as will be seen on reading the report of the chief sanitary inspector. An example is to be found in regard to meat, which case is further complicated by the fact that much of the meat supply of Bristol is obtained from country districts just outside the city boundaries where facilities for inspection are not such as obtain within the city. It is hoped that the advantages offered by a public abattoir will aid considerably the work of the department in suppressing this trouble.

The need for more laboratory examinations of food supplies is being considered by the Health Committee in connection with general laboratory work of the city; for example, although some 18,000 gallons of milk (of which about 9,098 gallons were either pasteurised or sterilised) are distributed daily in the city by more than a thousand producers and retailers, only fifty samples of milk were taken throughout the period for special examination for the presence of tubercle bacilli.

In a memorandum on bovine tuberculosis published this year by the Ministry of Health attention is drawn to the prevalence of bovine tuberculosis in man, especially in children. In the same memorandum the authorities conclude that "the testing of milk by the microscopic and biological methods can be of great value especially where applied to samples from herds of moderate size . . . and combined with competent clinical examinations of the cattle." Facilities for extensive examinations on these lines are lacking in Bristol but it is sincerely hoped that with the re-organisation of the pathological and bacteriological work of the city it will be possible for the department to take a more active part in the detection and prevention of tubercular infection of our milk supply if only for the sake of our child population. Some 12 per cent. of the samples examined were found to be infected—this shows the great danger to which our children are exposed.

### **General sanitation.**

[see pages 70-78].

In the past, scavenging in Bristol and the methods of disposing of refuse have left much to be desired. It is most gratifying to



notice the improvement which has taken place in the city in this direction during the last twelve months.

The introduction of motor vehicles properly covered has diminished the nuisance frequently caused by the use of open horse carts. Much still remains to be achieved and possibly educating the men in charge of the vehicles in their particular responsibilities is of no small importance.

Bristol offers particular scope for the introduction of tipping on scientific lines. In the past much nuisance has been caused by the casual and careless way in which tipping was done and the dumps kept. The improvement during last year has been remarkable and those responsible are to be congratulated upon their achievement.

There are still too many unflushed water closets in the city, but it is hoped that during the next few years much progress will be made in the reduction of this number and their replacement by properly flushed closets.

### **Housing.**

[see pages 80-84].

The report by Dr. Morison upon the working of this department brings out points of special interest in regard to the housing problem in the city. A close liaison has been formed between the staff operating the housing acts and the sanitary staff, by placing all the officers concerned under the direct supervision of the deputy medical officer of health.

There are certain points which have been brought home forcibly to the medical staff in regard to slum clearance—

(1) Once a house has been proved to be unfit for human habitation, it should at once be demolished, yet through lack of accommodation 336 houses of this type were occupied towards the end of last year, and of these either a closing or demolition order was outstanding for over a year in 234 cases. There is a distinct risk in regard to bringing any house under such an order unless the order is at once enforced.

(2) It must be remembered that if a slum has to be cleared the local authority must not in any way discriminate between the financial status of any of the inhabitants of such an area. There is need for bringing "the home" into line with other necessities of life, such as maintenance and institutional medical treatment, and powers for this purpose are given in the Housing Act, 1930. If the local authority cannot afford to provide a sanitary home for a family at a rent which it can pay, much less surely can the private owner do so. If a local authority selects its tenants according to their financial position, the poor must find a home probably in the slums or possibly they find their way into houses-let-in-lodgings, and so increase the difficulties in regard to overcrowding already existing.

By close co-operation with other departments concerned in this housing problem, an effort is made to see that the occupants of a condemned house have first call upon healthier alternative accommodation. It is hoped that soon where houses are under orders such orders will be carried out. But the real solution of the housing problem lies in the realisation that a healthy home is one of the essentials of life, and, for the purpose of public health, is an

urgent requirement, without regard to the economic status of the family concerned.

### **Co-ordination of medical services.**

The Council when considering the report of the Local Government Act Committee approved of the principle of co-ordinating all the medical services of the city under the medical officer of health as principal medical officer to the Council. This course had previously been adopted by the Health and Education Committees but has since been extended to most of the other committees of the Council. The advantages of this have been apparent during the year under review for it has been possible to utilise the medical services of the city without any overlapping and to bring various sections of the work into intimate contact one with the other.

### *Public assistance.*

The medical officer of health is also medical officer to the Public Assistance Committee, and attends the meetings of that committee as well as those of the various sub-committees when medical questions are under consideration. Close co-operation between this department and the other health activities of the council is thus brought about. The various medical activities of the public assistance department are dealt with on pages 144-6.

### **Registration.**

The Local Government Act Committee appreciated the close relationship which must necessarily exist between registration of births, deaths and marriages and the ordinary statistical work of a health department, and for that reason delegated the supervision to the Health Committee. It is hoped that when the committee submits its scheme the present duplication of records which exist will be taken into consideration and the long-needed statistical section of the health department founded.

### **Local Government Act, 1929.**

The following were some of the resolutions of the Local Government Act Committee submitted and approved by the Council :—

That the functions relating to infant life protection and vaccination be delegated to the Health Committee; that the officers of the Guardians wholly engaged on those duties and upon duties connected with the Cottage Homes and boarded-out children be placed under the control of the Health Committee; and that the Health Committee report to the Council as to the arrangements to be made in connection therewith.

That the committees of the Council administering the special acts be instructed to confer with the Public Assistance Committee from time to time, and report to the Council whether there are any other of the transferred functions in respect of which the Council may make declarations that such services shall be provided under the appropriate special Acts and not under the Poor Law Act, 1927.



That the town clerk be appointed clerk to the Public Assistance Committee.

That the medical officer of health being the principal medical officer of the Council and its committees, the medical officers performing any of the functions transferred under Part I of the Act of 1929 shall form part of the staff of the medical officer of health and act under his direction.

That the provisions of Part II of the Act (registration of births, marriages and deaths) so far as they can be performed by a committee, be delegated to the Health Committee and that the committee be requested to prepare a draft scheme for submission to the Council in due course.

#### *Administrative scheme.*

In the administrative scheme, approved by the Ministry of Health, the following provisions were declared to be carried out in future under the undermentioned acts and not by way of poor relief.

#### THE PUBLIC HEALTH ACTS 1875 TO 1926, AS EXTENDED BY SECTION 14 (2) OF THE LOCAL GOVERNMENT ACT, 1929.

- (1) The provision for the use of the inhabitants of the county borough of hospitals for the reception of persons suffering from notifiable infectious disease (other than tuberculosis).

#### MATERNITY AND CHILD WELFARE ACT, 1918.

- (1) The provision of hospital treatment for pregnant women.
- (2) The provision of hospital treatment for crippled children.
- (3) The provision of the services of a doctor for illness connected with pregnancy and illness (whether of the mother or the child) during the period of confinement in accordance with the arrangements made by the Council under the above-mentioned Act.
- (4) The provision of nursing in the home for women suffering from puerperal fever, and for children suffering from ophthalmia neonatorum, or any other disease the nursing of which is included in arrangements already made by the Council under the above-mentioned special Act.
- (5) The provision of milk or other similar food for expectant and nursing mothers and children medically certified to need additional nourishment.
- (6) In the foregoing paragraphs the term " children " means children who have not attained the age of 5 years and are not being educated in schools recognised by the Board of Education.

#### BLIND PERSONS ACT, 1920.

- (1) The provision of domiciliary assistance to blind persons.

#### PUBLIC HEALTH (TUBERCULOSIS) ACT, 1921.

- (1) The provision of sanatoria and hospitals for the treatment of all forms of tuberculosis.

## EDUCATION ACT, 1921.

(1) The education of children.

## DECLARATION OF INTENTION TO APPROPRIATE SOUTHMEAD HOSPITAL.

It is the intention of the Council on or after the appointed day, subject to the approval of the Minister of Health, to appropriate Southmead Hospital as a hospital for the sick under the Public Health Acts, 1875 to 1926, as extended by the Act.

In spite of much additional work resulting from the absorption of the Guardians by the Council as well as from the rapid general development of the health services of the city during the last twelve months, my first year of office has been a very happy one. In no small measure is this due to the enthusiasm and support always afforded to me by the Chairman of the Health Committee, and, indeed, by all members of the various committees. My best thanks are also due to the Town Clerk for his ever ready assistance and to the principal officers of the corporation. Finally, I wish to acknowledge with gratitude the valuable support given to me by the members of my staff, by the loyal and efficient manner in which they have carried out their duties.

I am, my Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

R. H. PARRY,

*Medical Officer of Health.*

PUBLIC HEALTH DEPARTMENT,

BRISTOL.

*July, 1931.*

## Summary of Statistics.

1929	EXTRACTS FOR THE YEAR.	1930
18,686	Area (in land aeres) ... ..	19,615
391,300	*Population (mid-year estimate)... ..	391,445
£11,500	Penny rate yield ... ..	£10,500
15.58	Birth rate per 1,000 population ... ..	15.73
12.93	Death rate „ „ „ ..	11.59
2.65	Natural increase „ „ „ ..	4.14
	Infant mortality per 1,000 livebirths—	
58.0	Legitimate ... ..	57.3
119.6	Illegitimate ... ..	86.8
59.8	Total ... ..	58.3
31.8	Neo-natal mortality per 1,000 livebirths ...	30.53
43.3	Stillbirth rate per 1,000 total births ...	36.9
4.4	Maternal mortality per 1,000 livebirths ...	3.57
0.39	Zymotic death rate per 1,000 population ...	0.37
6,095	*LIVEBIRTHS :	6,157
3,026	Legitimate males ... ..	3,096
2,871	„ females ... ..	2,862
97	Illegitimate males ... ..	122
101	„ females ... ..	97
276	*STILLBIRTHS—	236
151	Legitimate males ... ..	121
111	„ females ... ..	108
6	Illegitimate males ... ..	4
8	„ females ... ..	3
5,057	DEATHS—	4,532
36.83	Percentage of deaths occurring in public institutions ... ..	38.46
8	Maternal deaths from sepsis ... ..	9
19	„ „ other causes ... ..	13
1	Deaths from Measles (all ages) ... ..	52
37	„ „ Whooping cough (all ages) ...	20
28	„ „ Diarrhoea (under 2 years of age)	27
402	„ „ Pulmonary tuberculosis... ..	396
251	„ „ Influenza ... ..	26
62	„ „ Diphtheria ... ..	41
8	„ „ Scarlet fever ... ..	2

\* Figures supplied by Registrar General.

Note (1). Unless otherwise stated all figures relating to vital statistics in this report are compiled from local returns.

(2). The vital statistics furnished by the Registrar General for Bristol for 1930 together with annual summaries back to 1918 and quinquennial figures from 1881/1885 to 1926/1930 are printed in the appendix to this report (pages 151 to 162) together with comparative rates for England and Wales for births, deaths, infant and maternal mortalities.

# 1.—STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

## Area.

The present area of the city is 19,615 acres, exclusive of tidal waters or foreshore. This acreage includes 929 acres added to the city under the Bristol Corporation Act, 1930. Public parks and open spaces of 1,176 acres are available for recreation including :—

### *Under the control of the Corporation.*

Clifton and Durdham Downs	...	442	acres.
Blaise Castle Estate	...	190	„
Commons	...	90	„
Other parks and open spaces	...	346	„
<hr/>			
1,068 acres.			

### *Under the control of the National Trust.*

Shirehampton Park	...	99	acres.
Triangular space between Avon- mouth Road and West Town, Portway	...	9	„
<hr/>			
108 acres.			

## Population.

According to the 1921 census the population was 376,975, of which 173,783 were males and 203,192 females. This represents a population of 20.5 persons per acre.

### *1921.—Census population in age groups.*

	Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and up- wards	Total
Males	3,911	11,951	34,617	30,384	49,942	33,615	9,363	173,783
Females	3,874	11,646	34,525	37,385	62,320	39,169	14,273	203,192
	7,785	23,597	69,142	67,769	112,262	72,784	23,636	376,975

### *1921.—Census population of registration sub-districts.*

Ashley	...	49,505
Bedminster*	...	63,992
Bristol Central	...	39,841
Clifton	...	46,620
Knowle*	...	21,677
St. George	...	89,466
Stapleton	...	50,104
Westbury-on-Trym	...	15,770
TOTAL		376,975

\* NOTE.—By an order of the Registrar General dated the 5th December, 1928, the sub-registration districts of Bedminster and Knowle were amalgamated as from the 1st January, 1929 and became known as the Bristol South sub-registration district.

*Estimated population.*

The revised population as estimated by the Registrar General for mid-1929 is 391,445, and increase of 745 over the figure supplied for mid-1928. For the calculation of death rates this population should be reduced by the exclusion of non-civilians, estimated at 300, to a net figure of 391,145.

This population relates to the area as constituted at the end of 1930, but as the births and deaths for that year include, so far as relates to the portion of the year prior to the change, those occurring in the old area, adjustment has been made in the above mentioned population to make allowance for the change of area and the following adjusted figure has accordingly been used for the calculation of annual birth and death rates :—

391,335 for birth rates

391,035 for death rates

The estimated population for mid-1930 will not be available until after the 1931 census as the Registrar General, in computing the figure, proposes to take into account the population as ascertained by the census.

*Census 1931.*

The preliminary report on the census of the population of England and Wales taken on the 26th April, 1931, gives the following provisional figures for Bristol.

For comparison, the corresponding figures for the previous census are also shown.

	1931	1921	Increase
Area in statute acres ... (land and inland water).	19,674	18,436	1,238
Persons ... ..	396,918	377,018	19,900
Males ... ..	185,173	173,803	11,370
Females ... ..	211,745	203,215	8,530
<i>Intercensal increase.</i>			
Period	1921/1931	1911/1921	
Persons ... ..	19,900	19,845	
Percentage ... ..	5.3	5.6	

The net increase of the population for the whole of England and Wales is 5.4 per cent. The net increase for Bristol (5.3 per cent) is slightly less than this figure, but it is interesting to find that the districts immediately adjacent to the city have increased their populations by an average of 10.6 per cent, while the counties of Gloucester and Somerset (including county boroughs) show net increases of only 3.8 per cent and 2.0 per cent respectively. The actual figures for the adjacent districts are :—

Somersetshire—				Intercensal increase per cent.
Keynsham R.D.	...	...	...	17.8
Long Ashton R.D.	...	...	...	15.7
Gloucestershire—				
Chipping Sodbury R.D.		...	...	16.0
Mangotsfield U.D.	...	...	...	10.9
Kingswood U.D. ...	...	...	...	2.7
Warmley R.D.	...	...	...	7.2
Thornbury R.D.	...	...	...	4.3

The net increase of the population of the 83 county boroughs is 3.6 per cent.



**Inhabited houses.**

The census figures (1921) for inhabited houses and families were :

Structurally separate dwellings occupied...	...	72,470
Rooms occupied	... ..	408,040
Rooms per person	... ..	1.13
Number of private families	... ..	91,171
Population in private families	... ..	361,578

The census figures for 1931 are not yet available.

*Estimated number of inhabited houses on 31st March, 1931, according to rate books :—*

Inhabited	... ..	87,618
Void	... ..	1,229
Total		88,847

**Rateable value.**

The rateable value on April 1st, 1930 was £2,625,929, and sum represented by a penny rate £10,500.

**Social conditions and industries.**

Bristol is an important educational centre. In addition to the University with its medical school it has the Merchant Venturers Technical College and amongst other public schools in the city is the well known Clifton College.

The following are the principal occupations of the inhabitants in numerical order according to the census of 1921 :—transport, commercial and financial, textile and dress, metal, clerical, food and drinks, and tobacco. There has been no new industry of importance added during the year.

The highest recorded numbers of wholly unemployed persons in each quarter during 1930 were :—

		<i>Men</i>	<i>Women</i>	<i>Boys</i>	<i>Girls</i>
During 1st Quarter	...	9,445	2,176	370	656
2nd do.	...	9,539	2,653	540	613
3rd do.	...	12,145	3,266	726	711
4th do.	...	12,577	3,637	620	604

These figures show increases in all classes over the figures for 1929 except for men in the first quarter and boys and girls in first and second quarters.

Outdoor relief administered in the city was as follows :—

		Cases relieved.	Persons relieved.	Cost.
1930.				
On 28th June	...	2,829	5,718	£1,643 16 10
On 27th December	...	2,908	6,280	£1,999 14 6

The total cost of outdoor relief for the year ending 31st March, 1931, was £109,418.

## The Weather of 1930.

Report by Mr. H. H. HARDING, F.R. Met. Soc.

### *Observations at Bristol.*

Mean pressure at 9 a.m. G.M.T. (corrected)...	29.887 inches.
Departure from average (21 years) ...	—0.077 „
Greatest pressure at 9 a.m. ...	30.740 „ on Nov. 12th.
Least pressure at 9 a.m. ...	28.748 „ „ Feb. 1st.
Total rainfall at <i>Bishopston</i> ...	34.60 „
Departure from average ...	—0.49 „
Number of rainy days ...	216.
Heaviest rainfall in 24 hours ...	1.44 „ „ Sept. 19th.
Total rainfall at <i>Frampton Cotterell</i> ...	32.00 „
Departure from average ...	+1.53 „
Number of rainy days ...	213.
Days with 0.04 in. or more ...	150.
Days with less than 0.04 in. ...	53.
Heaviest fall in 24 hours ...	1.29 „ „ Sept. 19th.
Mean temperature (max. & min.) ...	50.1 degrees.
Departure from average ...	+0.5 „
Maximum temperature in shade ...	87.3 „ on Aug. 27th.
Minimum temperature ...	14.9 „ „ March 20th.
Extreme range ...	72.4 „
Mean temperature warmest day ...	74.8 „ „ Aug. 27th.
Mean temperature coldest day ...	28.9 „ „ Nov. 17th.
Hours of bright sunshine ...	1,428.
Days of bright sunshine ...	96.
Days entirely overcast ...	66.
Number of frosty nights ...	43.

The wild and stormy conditions which had attended the closing days of 1929 continued throughout the first two weeks of the year. A short period of fair and quiet conditions then obtained to the 21st, when a further period of rain set in which lasted to the close of the month. Temperature throughout was much above the normal. *February* brought a very welcome change, quiet, dry and frosty weather prevailing with little exception. *March* also proved cold but not unduly so apart from one notable exception. This, however, was of a very remarkable character, a snowfall—the only one worth mentioning of the season—on the 19th being followed by a frost of quite unusual intensity for the time of year. This proved indeed not only the most severe of the winter, but also the most severe experienced locally in March during the present century and probably for many years before. At Ross-on-Wye the reading was still lower, 19 degrees of frost occurring, this being for this station a record for the month; while at Cheltenham the frost was of equal intensity as at this station.

A rapid rise of temperature followed the month closing with a period of fair and favourable weather. Similar conditions predominated throughout the spring months, a remarkable and almost unique feature being that on no occasion after the early morning of March 25th did the protected thermometer fall to freezing point in this locality.

An early summer followed in *June*, this month proving the warmest of its name since the fine, hot summer of 1896 when the mean of the month was 62.6 degrees. *July* after a fair opening

brought a change to cool and unsettled weather which continued with little exception until towards the close of *August*. A complete change then followed, the last week of the month being the hottest experienced in this month for a number of years. For the period the daily readings from sheltered thermometers at four feet above grass in this locality were as follows :—

		Min.		Max.		Mean.
August	26th.	60.0	degrees.	84.5	degrees.	72.25 degrees.
„	27th.	62.3	„	87.3	„	74.8 „
„	28th.	58.2	„	87.0	„	72.6 „
„	29th.	59.6	„	87.0	„	73.3 „
„	30th.	58.0	„	79.5	„	68.8 „
„	31st.	59.0	„	72.0	„	65.95 „

Although higher day temperatures have been experienced locally on several occasions during the present century, this period of heat was felt more than any of late years, owing to the excessive humidity which accompanied it, this constituting a record for many years.

*September*, after commencing with great promise, brought rapidly deteriorating conditions, and it is seldom that this month brings to our islands so prolonged a period of gales and rain as that of its third week. At the same time in favour of the month the rainfall was not unduly heavy, for more fell locally in 1918, 1921 and 1927. On the other hand during the past 40 years there have only been four occasions when September has brought so many rainy days. Indeed from the 8th onward only two were entirely free from rain.

The wet period continued with little exception throughout the following two months. The falls however for *October* were generally slight and although its rainy days numbered 23, the total fall locally did not reach the average. *November* however apart from January proved the wettest month of the year and only on two previous occasions—these being in 1926 and 1929 when the amounts at this station were 6.59 inches and 8.21 inches respectively—during the present century has the month brought more rain. As in the spring the early autumn was free from frost and it was not until October 27th that the thermometer fell to freezing point, the slight frost then occurring being the first to occur locally since March 25th. Only once before during the present century has there been so big a gap between the last spring and the first autumn frost, this being in 1904, the dates then being March 27th and November 15th. Fairly seasonable and quiet conditions prevailed during the closing month, the most noteworthy characteristic of *December* being its frequent fogs.

Altogether the year in its weather was of an exceptionally favourable character, the remarkable absence of frost during its springtime and early autumn being chiefly responsible for a bountiful harvest, and had the prices obtainable been of a remunerative level, the year from an agricultural point of view would have been one of the most prosperous of recent years.

The results for the individual months are given in the table on page 160.

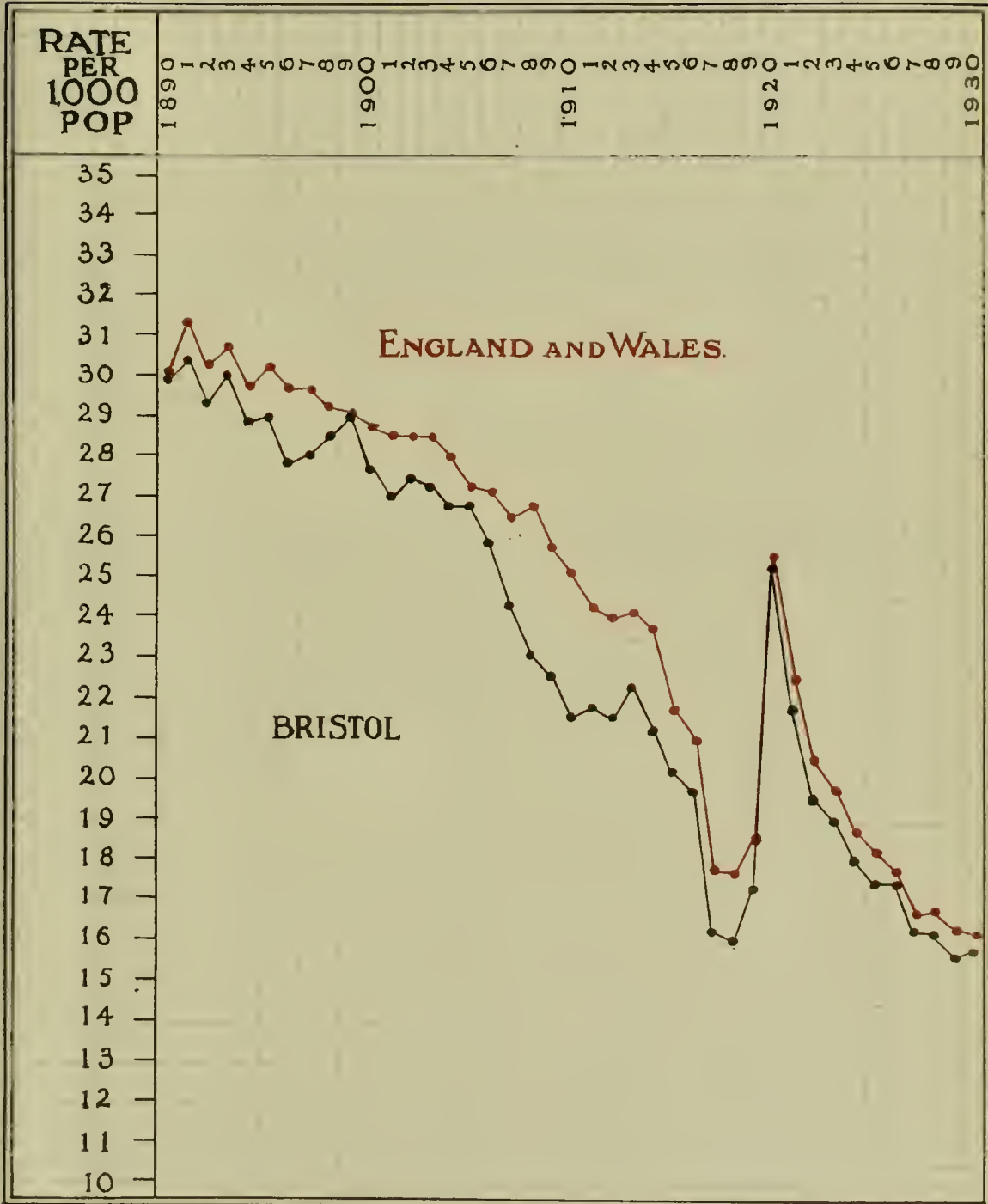
For the details relating to St. Andrew's Park, Bishopston, I am indebted to the courtesy of Mr. H. Vicars Webb.



DIAGRAM I.

# BIRTH RATE 1890-1930.

(FROM FIGURES SUPPLIED BY THE REGISTRAR GENERAL)





**Livebirths.\***

The total births registered in the city during the year 1930 numbered 6,438. In order to get an accurate birth rate for the city the children of non-residents are transferred to the district to which their parents belong, and the children of residents born outside the city require to be added. The Registrar General has supplied the number of these transferable births and after the necessary adjustments have been made the net total of 6,157 births is obtained from which figure the birth rate for 1930 has been calculated to be 15.73 per 1,000 population. This rate is an increase of 0.15 on the rate for last year, which was the lowest rate recorded for Bristol. The birth rate for England and Wales for 1930 was 16.3 per 1,000.

The following table shows the net births by sex and legitimacy together with the rates per 1,000 living :

1929		1930		
		Legitimate	Illegitimate	Total
3,123	Males ... ..	3,076	122	3,198
2,972	Females ... ..	2,862	97	2,959
6,095	TOTAL ... ..	5,938	219	6,157
15.58	Rate per 1,000 living	15.17	0.56	15.73

\* Registrar General's figures.

Of the total live births 96% were legitimate and 4% illegitimate. There were 24 more illegitimate live births than in 1929 and ten less than in 1928. There were 13 fewer female births but 75 more male births in 1930 than in 1929.

The diagram facing this page gives the curve of the birth rate in Bristol compared with England and Wales since 1890. With the exception of the temporary rise of the birth rate during the post war years 1918-1920, the rate has been steadily falling. Throughout the period Bristol has maintained a slightly lower birthrate than that of the rest of the country.

*Births notified.*

The number of births notified under the Notification of Births Acts, 1907 and 1915, is included in the report on the maternity and child welfare section (see page 60).

**Stillbirths.\***

During the year 272 stillbirths were registered in the city. After adjustment for inward and outward transfers a net total of 236 stillbirths is obtained giving a rate per 1,000 living of 0.60, a decrease of 0.11 compared with 1929, and a rate per 1,000 total births (including stillbirths) of 36.9, a decrease of 6.4 on the rate for 1929, viz. :—43.3.

The corresponding figures for 1930 for England and Wales are 0.69 and 41.0. The following table shows the net stillbirths by

sex and legitimacy, together with the rates per 1,000 living and per 1,000 total births :—

1929		1930		
		Legitimate	Illegitimate	Total
157	Males ... ..	121	4	125
119	Females ... ..	108	3	111
276	TOTAL ... ..	229	7	236
0.71	Rate per 1,000 living	0.58	0.02	0.60
43.3	Rate per 1,000 total births ... ..	35.8	1.1	36.9

\* Registrar General's figures.

*Total births registered by sex and legitimacy.*

TOTAL BIRTHS REGISTERED. *			
	Total	Legitimate	Illegitimate
LIVEBIRTHS —			
Males ... ..	3,368	3,216	152
Females ... ..	3,164	3,035	129
Total ... ..	6,532	6,251	281
STILLBIRTHS—			
Males ... ..	144	136	8
Females ... ..	127	121	6
Total ... ..	271	257	14
Total Registrations	6,803	6,508	295

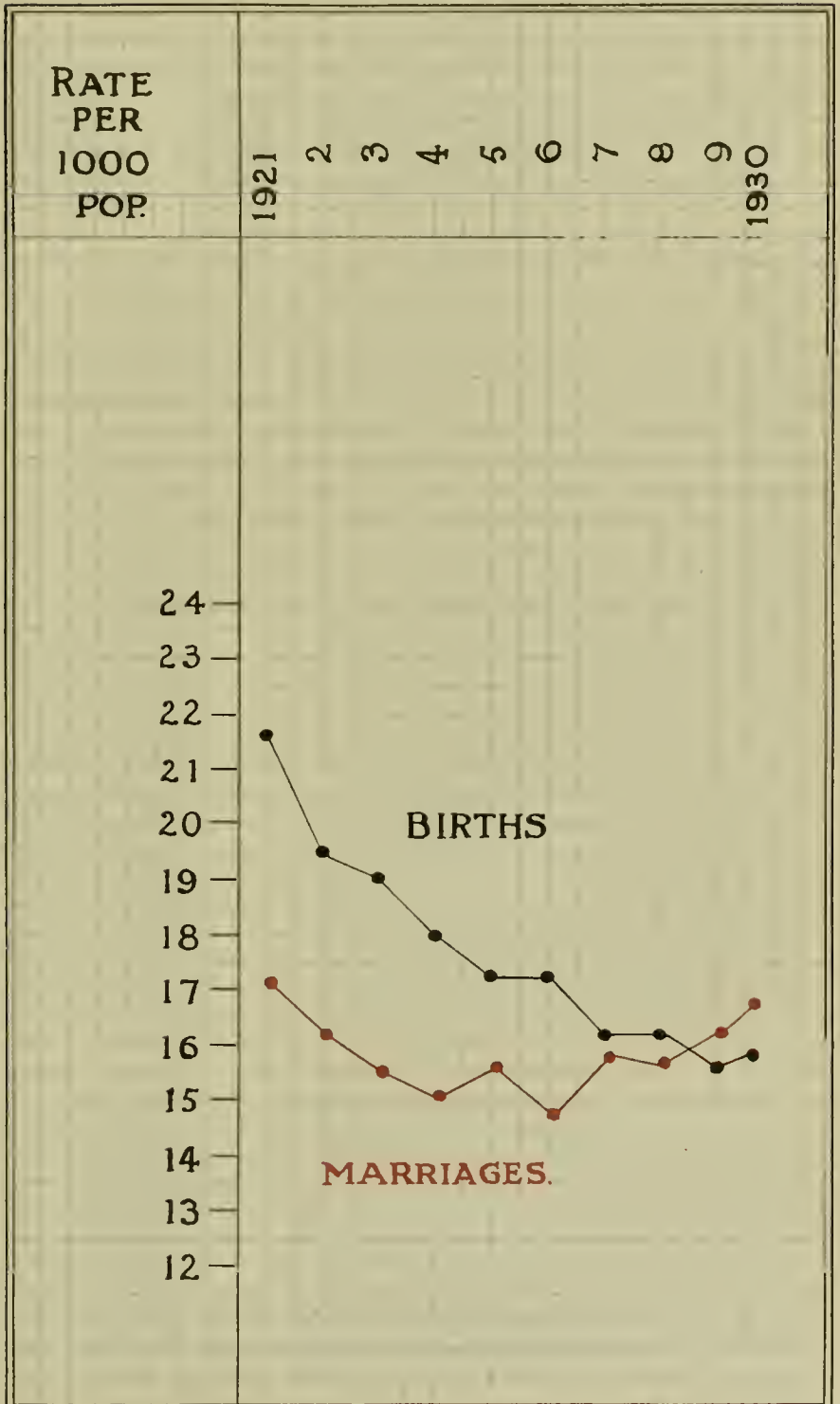
The above figures are uncorrected.

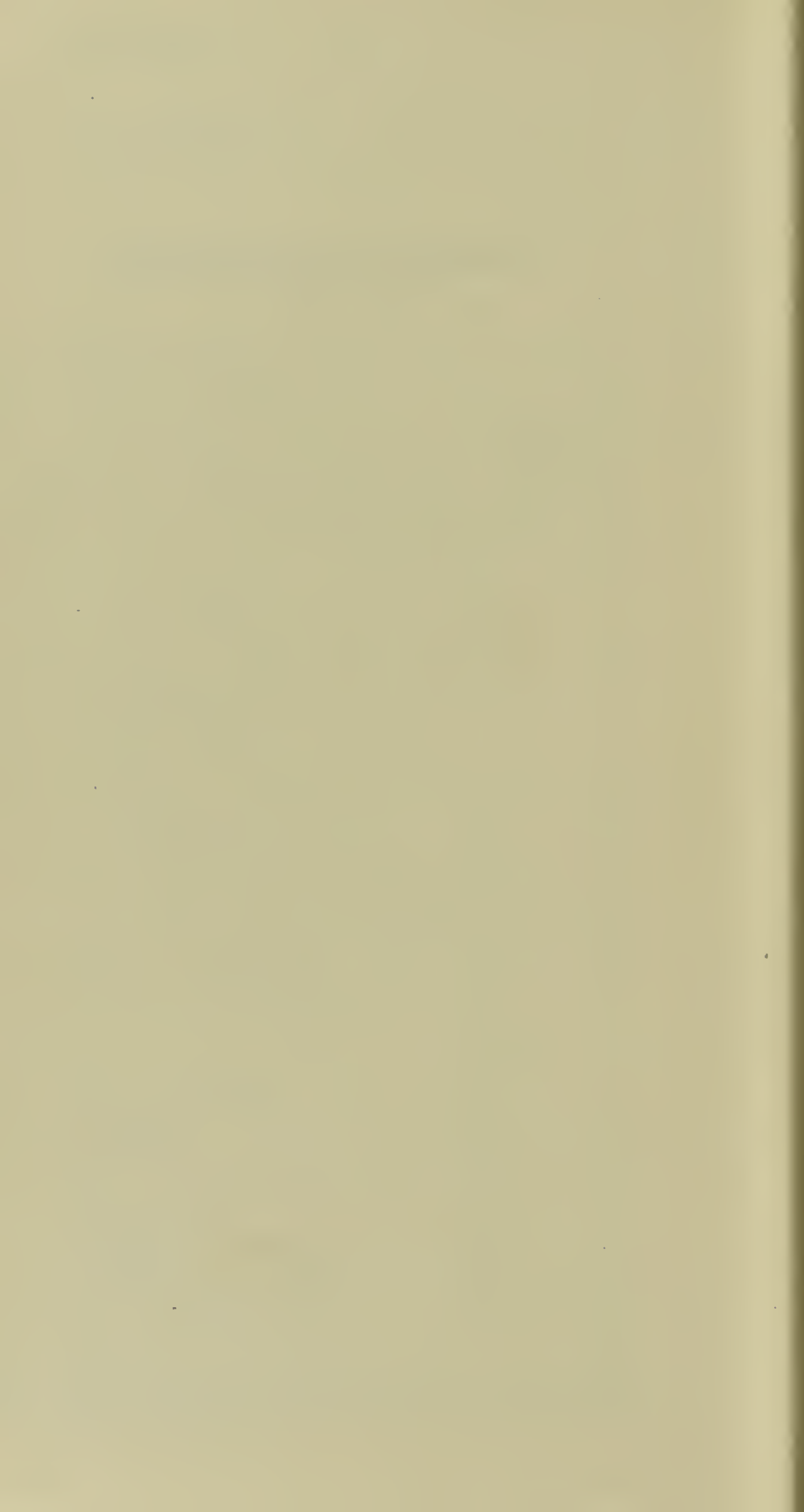
\* Net figures corrected for inward and outward transferable births, as supplied by the Registrar General, are given in the preceding tables.

*Total births registered in registration sub-districts.*

	TOTAL	Ashley	Bristol South	Bristol Central	Clifton	St. George	Stapleton	Westbury-on-Trym
LIVE BIRTHS :								
Males ... ..	3,368	319	673	622	431	598	346	379
Females ... ..	3,164	286	608	630	403	568	331	338
Total ... ..	6,532	605	1,281	1,252	834	1,166	677	717
STILLBIRTHS :								
Males ... ..	144	6	19	52	19	20	13	12
Females ... ..	127	5	18	57	15	15	13	7
Total ... ..	271	11	37	109	34	35	26	19
TOTAL REGISTRATIONS ... ..	6,803	616	1,318	1,361	868	1,201	703	736

# MARRIAGE AND BIRTH RATES 1921-1930.







*Natural increase of population, 1920-1930.*

(Registrar General's figures).

Rate per 1,000 population	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920
Births ... ..	15.7	15.6	16.3	16.3	17.4	17.4	18.0	19.1	19.5	21.7	25.4
Deaths ... ..	11.4	12.9	11.5	12.4	11.5	13.4	12.2	11.3	12.8	11.1	11.7
Natural Increase } Number	1,687	1,022	1,861	1,506	2,157	1,548	2,239	2,976	2,468	4,053	5,172
} Rate	4.3	2.6	4.8	3.9	5.9	4.0	5.8	7.8	6.7	10.6	13.7

In the annual report for 1929 it was pointed out that the population of Bristol appeared to be rapidly becoming stationary, the natural increase rate of population having fallen to 2.6 per 1,000 population. It will be noticed from the above table that the birth rate is higher for 1930 and the death rate lower with the result that the natural increase rate has gone up to 4.3 per 1,000 population.

**Marriages.***Marriage rates, 1921-1930.*

	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921
Marriages ...	3,320	3,197	3,059	3,071	2,845	3,012	2,924	2,997	3,181	3,282
Rate per 1,000 population ...	16.9	16.3	15.7	15.9	14.8	15.6	15.1	15.5	16.3	17.2
England and Wales (Rate) ...	15.8	15.8	15.3	15.7	14.3	15.2	15.3	15.2	15.7	16.9

The relation between the marriage and the birth rates per 1,000 population is shown diagrammatically on page 24.

Up to 1926 the marriage and the birth rate varied more or less directly with each other, but from 1927 onwards that does not appear to be the case. Until 1927 it was legitimate to argue that the explanation of the falling birth rate in the city was the fall in the number of marriages. Since 1927 however there appears quite clearly from the diagram to be another factor at work. Whereas the marriage rate for 1930 (per 1,000 population) is approximately the same as it was in 1921, the birth rate has fallen during the same period from 22 (approximately) to 16 (approximately). Apparently marriages are not as fertile nowadays as they were ten years ago.

**Deaths.**

There were 4,816 deaths registered in the city during the year including 375 deaths of non-residents chiefly occurring in public institutions, nursing homes, etc. As in the case of births, it is necessary to adjust this figure by deducting the deaths of non-residents and adding the deaths of residents which occurred outside the city, in order to arrive at a true figure for calculating the death rate of Bristol residents. After this adjustment a net total of 4,532 deaths is obtained or 525 less than last year. This gives a death rate of 11.59 per 1,000 compared with 12.93 in 1929, which

was an unusually high rate owing to the heavy toll of respiratory deaths in the first quarter of that year. The rate for England and Wales for 1930 is 11.4 per 1,000 and 11.5 for all county boroughs.

The average age at death of persons aged 65 and upwards was 76 years, 1 month.

The number of inquests, including seven deaths certified by the coroner after post mortem without an inquest, held at Bristol was 371, 26 less than in 1929.

The table below gives details of the number of deaths, with death rates per 1,000 and percentage to total deaths for each of the principal causes.

Further information regarding the number of deaths by causes follow in tabular form, viz. :—in quarters, in age groups, and in registration sub-districts.

Diagram 3 gives the comparative death-rates for England and Wales since 1890.

### 1930.

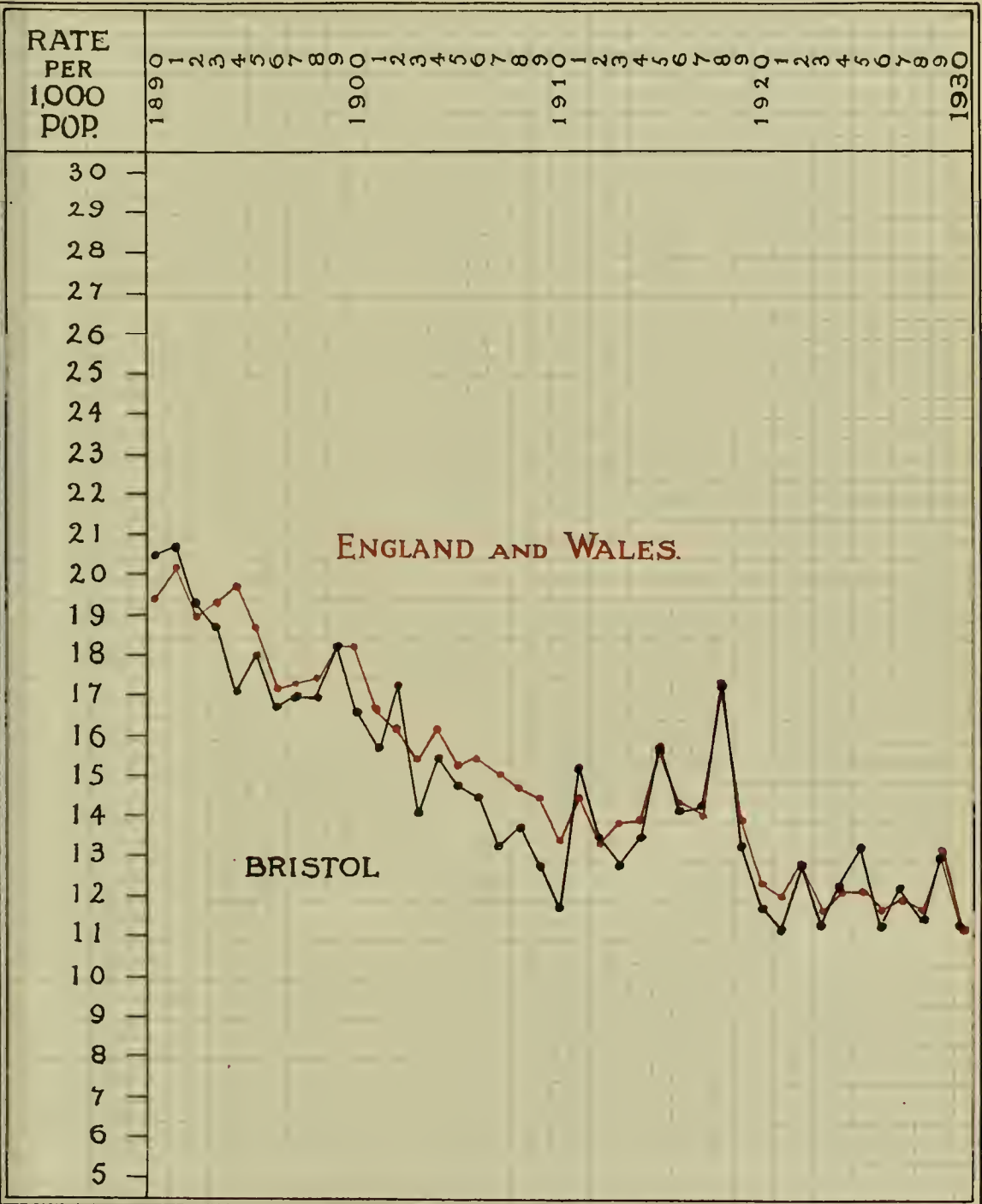
#### *Principal causes of death.*

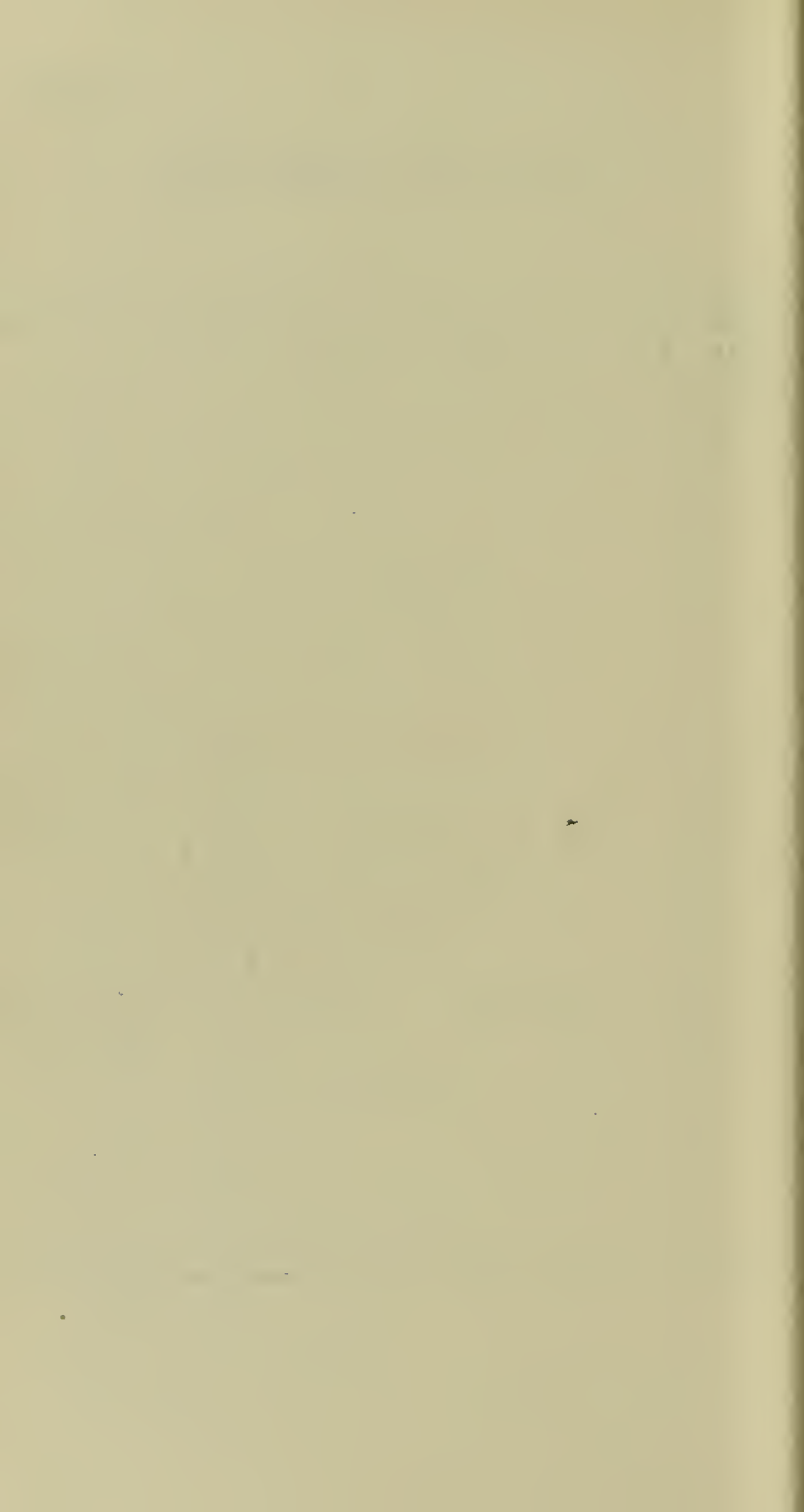
Death rate per 1,000	Disease.	Net deaths in 1930	% to total deaths.
0.002	Enteric fever ... ..	1	0.02
—	Small-pox ... ..	—	—
0.13	Measles ... ..	52	1.15
0.01	Scarlet fever... ..	2	0.04
0.05	Whooping cough ... ..	20	0.44
0.10	Diphtheria ... ..	41	0.91
0.07	Influenza ... ..	26	0.57
0.02	Encephalitis lethargica ... ..	7	0.15
0.01	Meningococcal meningitis ... ..	4	0.09
1.01	Tuberculosis of respiratory system	396	8.74
0.15	Other tuberculous diseases ... ..	57	1.26
1.51	Cancer, malignant disease ... ..	592	13.06
0.10	Rheumatic fever ... ..	41	0.91
0.15	Diabetes ... ..	59	1.30
0.63	Cerebral haemorrhage, etc. ... ..	246	5.43
2.25	Heart disease ... ..	878	19.37
0.37	Arterio-sclerosis ... ..	143	3.16
0.39	Bronchitis ... ..	152	3.35
0.70	Pneumonia (all forms) ... ..	272	6.00
0.11	Other respiratory diseases ... ..	42	0.93
0.07	Ulcer of stomach or duodenum ... ..	26	0.57
0.10	Diarrhoea, etc. ... ..	40	0.88
0.05	Appendicitis ... ..	20	0.44
0.02	Cirrhosis of liver ... ..	10	0.22
0.51	Acute and chronic nephritis ... ..	202	4.46
0.02	Puerperal sepsis ... ..	9	0.20
0.03	Other accidents and diseases of pregnancy and parturition ... ..	13	0.29
0.43	Congenital debility and malformation, premature birth... ..	169	3.73
0.13	Suicide ... ..	50	1.10
0.32	Other deaths from violence ... ..	125	2.76
2.14	Other defined diseases ... ..	835	18.43
0.01	Causes ill-defined or unknown ... ..	2	0.04
11.59		4,532	100.00



# DEATH RATE 1890-1930.

(FROM FIGURES SUPPLIED BY THE REGISTRAR GENERAL.)





Heart disease again heads the list of specified diseases as the cause of 19.37% of all deaths with cancer second with 13.06%. The slight drop in heart deaths—0.78%—compared with last year is associated with the decrease in respiratory deaths, but the cancer increase of 2.46% (1.51 per 1,000 as compared with 1.37 in 1929) shows that deaths from this disease progressively increase year by year.

The only other disease in which there was a notable increase in the number of deaths was measles. Fifty-two deaths were recorded, all in the fourth quarter when the disease was epidemic, and it continued well into 1931. The death rate for 1930 from measles was 0.13 per 1,000. This, however, does not give a true indication of the severity of the epidemic because 61 deaths occurred during the first quarter of the current year. The fatal cases were all children under the age of fifteen years. The last time the disease was prevalent (in 1928-29) 99 deaths occurred.

### 1930.

#### *Causes of death in quarters.*

Disease.	Quarters.				Total
	1st	2nd	3rd	4th	
Enteric fever ... ..	—	—	1	—	1
Small-pox ... ..	—	—	—	—	—
Measles ... ..	—	—	—	52	52
Scarlet fever ... ..	2	—	—	—	2
Whooping cough ... ..	8	4	4	4	20
Diphtheria ... ..	24	3	4	10	41
Influenza ... ..	11	8	3	4	26
Encephalitis lethargica ... ..	3	3	1	—	7
Meningococcal meningitis ... ..	1	1	1	1	4
Tuberculosis of respiratory system ... ..	114	90	94	98	396
Other tuberculous diseases ... ..	15	17	11	14	57
Cancer, malignant disease ... ..	151	156	127	158	592
Rheumatic fever ... ..	16	10	7	8	41
Diabetes ... ..	19	13	8	19	59
Cerebral haemorrhage, etc. ... ..	61	63	51	71	246
Heart disease ... ..	229	200	204	245	878
Arterio-sclerosis ... ..	35	30	29	49	143
Bronchitis ... ..	72	21	18	41	152
Pneumonia (all forms) ... ..	105	59	37	71	272
Other respiratory diseases ... ..	10	6	10	16	42
Ulcer of stomach or duodenum ... ..	7	4	7	8	26
Diarrhoea, etc. ... ..	5	14	13	8	40
Appendicitis ... ..	4	6	4	6	20
Cirrhosis of liver ... ..	2	4	1	3	10
Acute and chronic nephritis ... ..	62	47	42	51	202
Puerperal sepsis ... ..	2	2	4	1	9
Other accidents and diseases of pregnancy and parturition ... ..	3	1	3	6	13
Congenital debility and malformation, premature birth ... ..	51	45	34	39	169
Suicide ... ..	15	17	10	8	50
Other deaths from violence ... ..	25	33	32	35	125
Other defined diseases ... ..	232	227	166	210	835
Causes ill-defined or unknown ... ..	1	1	—	—	2
TOTAL ... ..	1,285	1,085	926	1,236	4,532

1930.

*Causes of death at ages.*

CAUSE OF DEATH.				Deaths in whole district at subjoined ages								Corrections made for transferable deaths.		Total Deaths in Public Institutions.
				All ages	Under 1	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	Inward Transfers (+)	
Certified .. .. .	4530	357	78	85	120	209	492	1183	2006	..	..	..		
Uncertified .. .. .	2	2	..	..	..	..	..	..	..	..	..	..		
1 Enteric fever .. .. .	1	..	..	..	..	..	..	1	..	..	..	..		
2 Small-pox .. .. .	..	..	..	..	..	..	..	..	..	..	..	..		
3 Measles .. .. .	52	5	21	19	7	..	..	..	..	..	1	19		
4 Scarlet fever .. .. .	2	..	1	..	1	..	..	..	..	..	..	1		
5 Whooping cough .. .. .	20	6	8	5	1	..	..	..	..	..	1	8		
6 Diphtheria .. .. .	41	..	2	12	27	..	..	..	..	..	1	37		
7 Influenza .. .. .	26	..	..	..	..	1	5	9	11	1	2	4		
8 Encephalitis lethargica .. .. .	7	..	..	..	..	..	4	2	1	..	1	4		
9 Meningococcal meningitis .. .. .	4	2	1	..	1	..	..	..	..	..	..	2		
10 Tuberculosis of respiratory system ..	396	1	..	1	2	89	183	95	25	7	13	169		
11 Other tuberculous diseases .. .. .	57	..	5	10	10	12	10	8	2	3	8	43		
12 Cancer, malignant disease .. .. .	592	..	..	1	1	3	47	242	298	7	71	236		
13 Rheumatic fever .. .. .	41	..	..	1	11	10	9	8	2	..	4	17		
14 Diabetes .. .. .	59	..	..	..	1	1	7	18	32	2	4	18		
15 Cerebral haemorrhage, etc. .. .. .	246	..	..	..	..	3	6	66	171	6	5	78		
16 Heart disease .. .. .	878	..	..	1	3	8	40	226	600	12	32	252		
17 Arterio-sclerosis .. .. .	143	..	..	..	..	..	4	32	107	2	8	18		
18 Bronchitis .. .. .	152	14	1	4	1	1	4	28	99	..	5	32		
19 Pneumonia (all forms) .. .. .	272	69	19	11	4	16	25	61	67	9	16	115		
20 Other respiratory diseases .. .. .	42	..	1	1	2	2	4	17	15	..	2	16		
21 Ulcer of stomach or duodenum .. .. .	26	..	..	..	..	1	2	19	4	..	8	20		
22 Diarrhoea, etc. .. .. .	40	19	8	1	..	..	1	5	6	1	2	24		
23 Appendicitis .. .. .	20	..	..	..	4	3	3	6	4	1	4	16		
24 Cirrhosis of liver .. .. .	10	1	..	..	..	..	..	7	2	..	1	3		
25 Acute and chronic nephritis .. .. .	202	..	1	1	5	4	12	86	93	5	18	74		
26 Puerperal sepsis .. .. .	9	..	..	..	..	4	5	..	..	..	7	7		
27 Other accidents and diseases of pregnancy and parturition ..	13	..	..	..	..	..	13	..	..	..	4	12		
28 Congenital debility and malformation premature birth .. .. .	169	166	1	..	1	1	..	..	..	1	20	65		
29 Suicide .. .. .	50	..	..	1	..	6	14	22	7	1	4	9		
30 Other deaths from violence .. .. .	125	4	4	5	18	12	16	22	44	14	28	51		
31 Other defined diseases .. .. .	835	72	5	11	20	32	78	202	415	19	105	393		
32 Causes ill-defined or unknown .. .. .	2	..	..	..	..	..	..	1	1	..	..	..		
All Causes .. .. .	4532	359	78	85	120	209	492	1183	2006	91	375	1743		
Sub-entries included in above figures	31a Poliomyelitis .. .. .	1	..	..	..	..	1	..	..	..	..	1		
	b Erysipelas .. .. .	10	1	..	..	..	1	5	3	..	..	9		
	c Venereal disease .. .. .	17	5	..	..	..	2	6	4	..	1	15		
	d Dysentery .. .. .	3	..	..	..	..	..	..	3	..	..	3		



1930.

*Causes of death in registration sub-districts.*

CAUSE OF DEATH		DEATHS IN DISTRICTS AT ALL AGES.								
		All ages	Ashley	Bristol South	Bristol Central	Clifton	St. George	Stapleton	Westbury-on-Trym	Municipal Institutions (home unknown)
Certified .. .. .		4,530	696	915	526	583	982	580	227	21
Uncertified .. .. .		2	..	1	..	..	1	..	..	..
1 Enteric fever .. .. .		1	1	..	..	..	..	..	..	..
2 Small-pox .. .. .		..	..	..	..	..	..	..	..	..
3 Measles .. .. .		52	4	4	17	1	18	7	1	..
4 Scarlet fever .. .. .		2	..	..	..	2	..	..	..	..
5 Whooping cough .. .. .		20	1	6	6	..	5	2	..	..
6 Diphtheria .. .. .		41	8	6	2	3	16	5	1	..
7 Influenza .. .. .		26	6	6	1	5	4	2	2	..
8 Encephalitis lethargica .. .. .		7	2	2	..	1	..	1	1	..
9 Meningococcal meningitis .. .. .		4	1	3	..	..	..	..	..	..
10 Tuberculosis of respiratory system .. .. .		396	55	85	48	38	101	51	17	1
11 Other tuberculous diseases .. .. .		57	5	13	9	8	9	10	3	..
12 Cancer, malignant disease .. .. .		592	104	120	66	90	116	59	35	2
13 Rheumatic fever .. .. .		41	2	13	6	1	10	7	2	..
14 Diabetes .. .. .		59	10	14	6	9	13	4	3	..
15 Cerebral haemorrhage, etc. .. .. .		246	32	43	29	30	54	45	12	1
16 Heart disease .. .. .		878	143	154	84	99	217	127	46	8
17 Arterio-sclerosis .. .. .		143	29	36	16	23	21	13	5	..
18 Bronchitis .. .. .		152	20	28	27	25	31	17	3	1
19 Pneumonia (all forms) .. .. .		272	30	47	30	44	77	33	11	..
20 Other respiratory diseases .. .. .		42	4	7	6	7	12	4	2	..
21 Ulcer of stomach or duodenum .. .. .		26	6	5	1	4	5	3	1	1
22 Diarrhoea, etc. .. .. .		40	7	7	10	1	9	3	2	1
23 Appendicitis .. .. .		20	2	4	2	3	4	3	2	..
24 Cirrhosis of liver .. .. .		10	1	2	2	1	3	..	1	..
25 Acute and chronic nephritis .. .. .		202	20	60	21	17	50	21	13	..
26 Puerperal sepsis .. .. .		9	2	..	1	1	4	1	..	..
27 Other accidents and diseases of pregnancy and parturition .. .. .		13	5	3	1	2	1	..	1	..
28 Congenital debility and malformation, premature birth .. .. .		169	21	45	19	22	31	22	9	..
29 Suicide .. .. .		50	10	12	7	6	7	2	6	..
30 Other deaths from violence .. .. .		125	21	21	22	21	19	14	7	..
31 Other defined diseases .. .. .		835	143	169	87	119	146	124	41	6
32 Causes ill-defined or unknown .. .. .		2	1	1	..	..	..	..	..	..
All causes .. .. .		4,532	696	916	526	583	983	580	227	21
Sub-entries included in above figures	31a Poliomyelitis .. .. .	1	..	..	..	..	..	..	1	..
	b Erysipelas .. .. .	10	1	2	4	..	2	1	..	..
	c Venereal disease .. .. .	17	2	5	2	2	4	1	1	..
	d Dysentery .. .. .	3	..	..	..	1	..	1	..	1
Deaths of infants under 1			41	82	49	38	89	44	15	1

### Deaths in institutions.

There is no doubt that considerably more use is being made of institutions by people suffering from various complaints. In 1930, 2,021 or 42% of the gross registered deaths occurred in public institutions. This compares with 33% in 1920. The table given below will show this increase. The figures in parenthesis show the number of deaths in public institutions. Included for comparison is the number of deaths (uncorrected) in the city from some diseases during the last ten years :—

Total deaths	Respiratory tuberculosis	Cancer	Heart disease	Nephritis	Congenital debility, premature births, etc.	All causes
1920	365 (124)	454 (149)	421 (67)	155 (58)	271 (75)	4,563 (1,497)
1921	358 (130)	494 (150)	429 (64)	152 (77)	225 (76)	4,370 (1,577)
1922	403 (130)	475 (130)	506 (65)	149 (54)	250 (80)	5,091 (1,608)
1923	367 (126)	537 (193)	465 (63)	138 (59)	188 (68)	4,522 (1,655)
1924	364 (153)	519 (169)	543 (92)	170 (71)	205 (81)	4,945 (1,763)
1925	365 (149)	548 (188)	556 (99)	167 (68)	194 (70)	5,387 (1,979)
1926	377 (126)	523 (185)	630 (144)	147 (61)	206 (76)	4,615 (1,732)
1927	394 (161)	599 (236)	796 (177)	170 (64)	170 (62)	5,023 (1,871)
1928	340 (134)	609 (259)	859 (269)	211 (81)	187 (85)	4,742 (1,950)
1929	396 (169)	615 (271)	1,027 (287)	195 (83)	190 (82)	5,356 (2,168)
1930	402 (180)	656 (293)	898 (272)	215 (88)	188 (78)	4,816 (2,021)

### Infant Mortality.

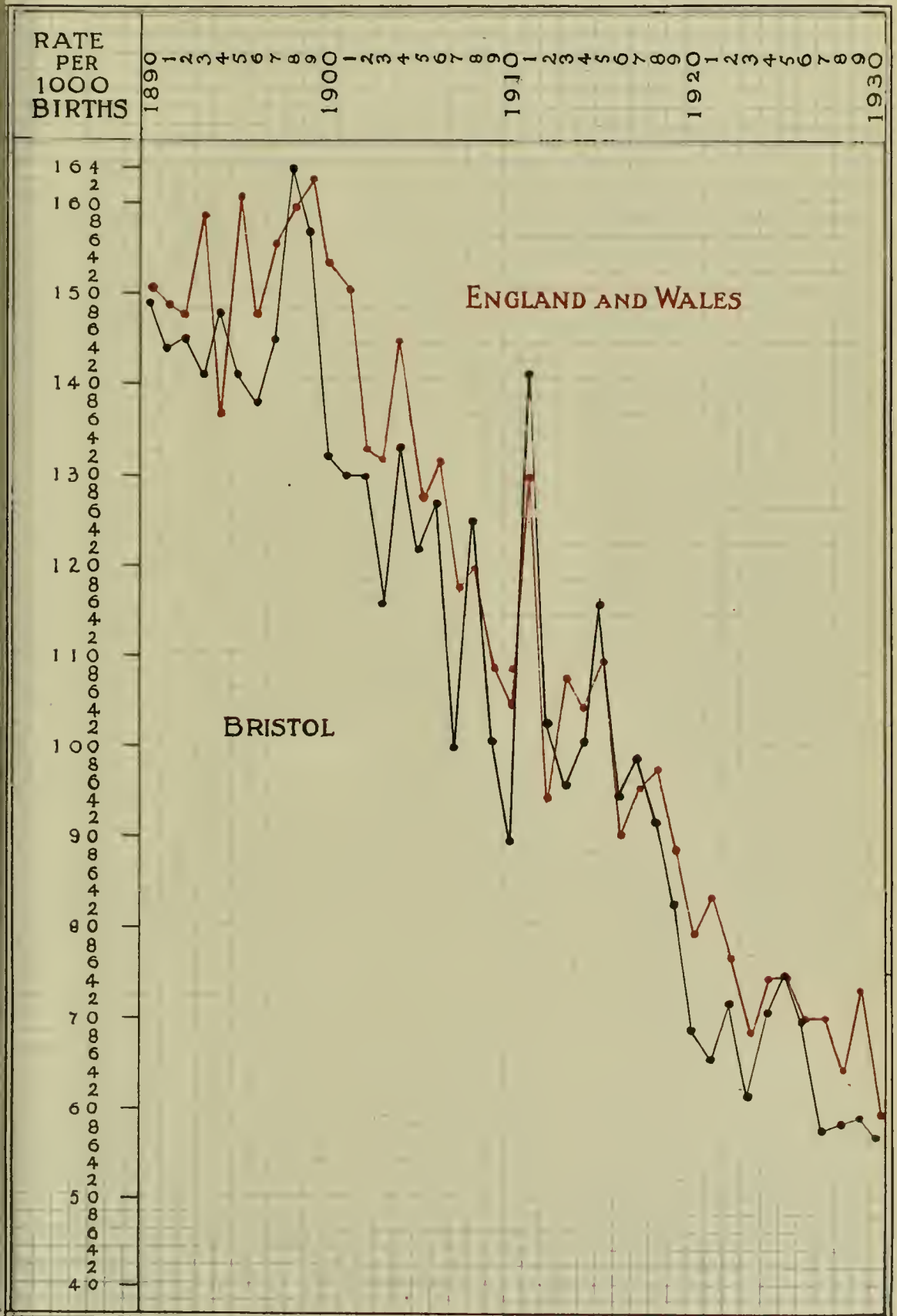
There were 388 deaths under one year reported in Bristol during 1930. After adjustment for inward and outward transferable deaths, a net total of 359 infant deaths is obtained, or six less than the net deaths registered in 1929.

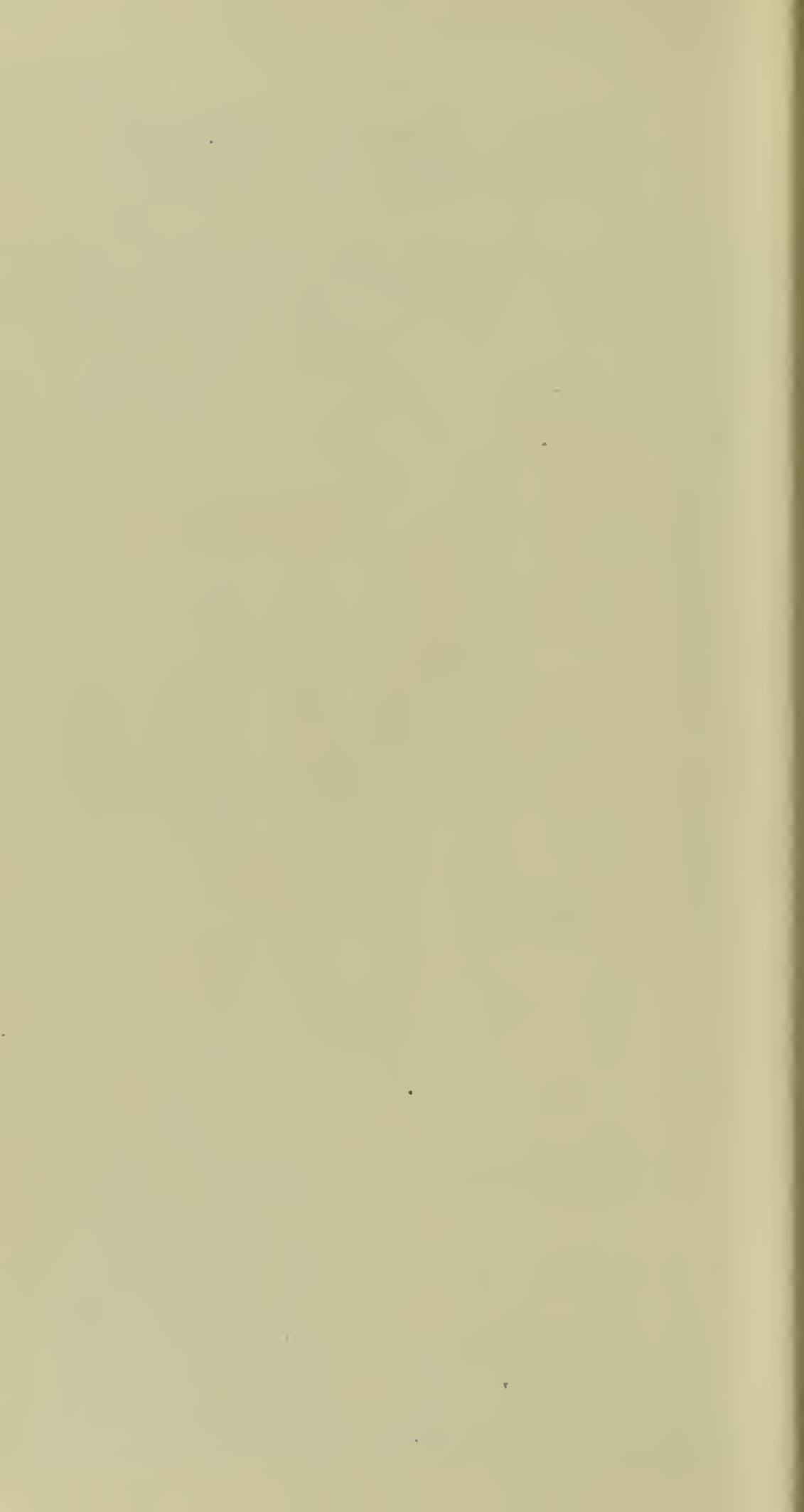
This gives an infant mortality rate of 58.3 per 1,000 births compared with 59.8 in 1929, a decrease of 1.5 per 1,000 births. The rate for England and Wales for 1930 was 60.0 per 1,000 births and 64.0 for all county boroughs.

Of the 359 infant deaths no less than 198 (or 55%) occurred in infants under one month—a neo-natal mortality rate of 30.53 per 1,000 births.

# INFANT MORTALITY, 1890-1930.

(FROM FIGURES SUPPLIED BY THE REGISTRAR GENERAL)







An analysis of infant deaths is given in the following table :—

1929		1930			
Total		Males	Females	Total	Infant mortality rate.
343	Legitimate	198	142	340	57.3 per 1,000 legitimate births.
22	Illegitimate	12	7	19	86.8 per 1,000 illegitimate births.
365	Total	210	149	359	58.3 per 1,000 births.

The mortality rate of illegitimate infants fell in 1930 to 86.8 per 1,000 illegitimate births as compared with 119.6 in 1929.

The table on page 34 gives the stated causes of deaths in weeks and months under one year, while the following indicates the number of deaths in quarters :—

1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	TOTAL
121	91	66	81	359

As in 1929, pneumonia again heads the list of causes of infant deaths (72) after, of course, the deaths attributed to premature birth (88).

Deaths under one yr.	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921
Number ... ..	359	365	372	359	463	508	517	466	576	570
Rate per 1,000 births	58.3	59.8	58.7	56.9	69.7	75.8	71.6	62.4	74.1	67.8

Diagram 4 opposite illustrates the curve of the infant mortality-rate in Bristol compared with the rate for England and Wales since 1890. This shows the infant mortality-rate to be below that for England and Wales.

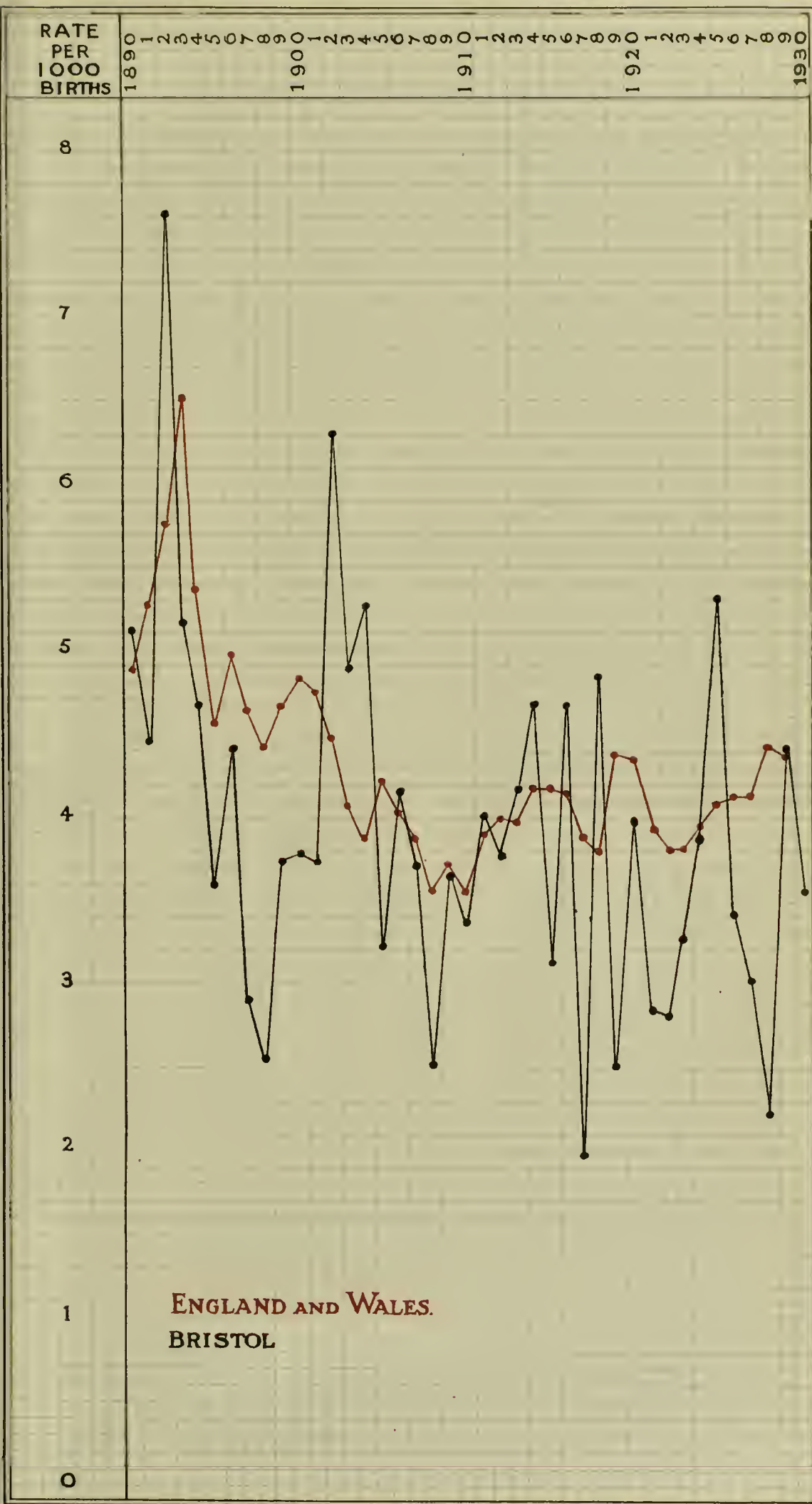
## INFANT MORTALITY.

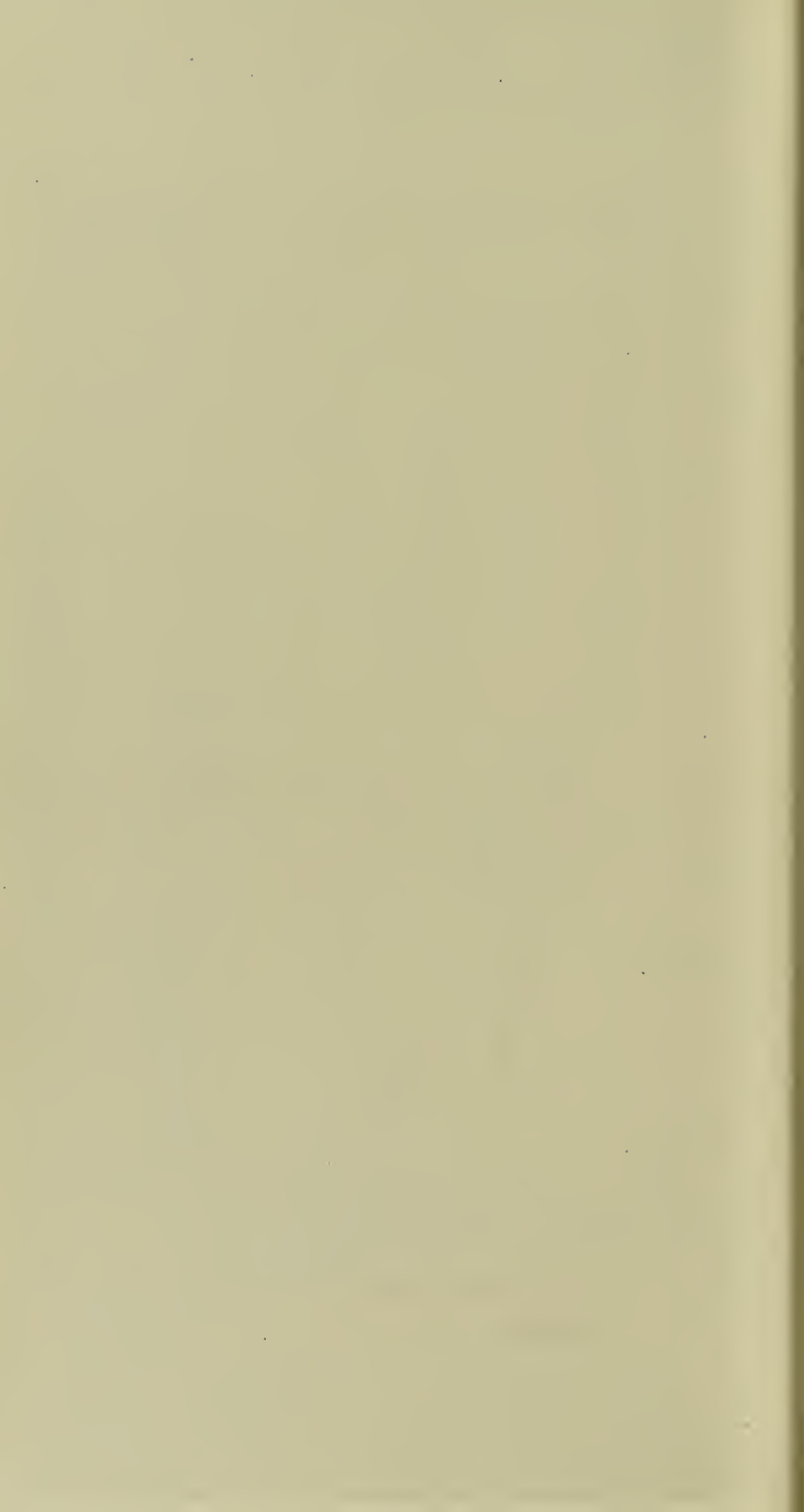
Deaths from stated causes in weeks and months under one year of age.

CAUSE OF DEATH	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under one month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total deaths under one year
	137 2	23. ...	15 ...	21 ...	196 2	39 ...	19 ...	16 ...	13 ...	11 ...	11 ...	13 ...	8 ...	14 ...	11 ...	6 ...	357 2
All Causes { Certified Uncertified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Small-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping cough ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and croup ...	1	...	...	...	1	1	...	1	...	...	...	1	...	2	...	...	...
Erysipelas ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous meningitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal tuberculosis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other tuberculous diseases ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not tuberculous) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions ...	11	3	4	...	18	3	1	...	...	...	...	...	...	...	...	...	...
Laryngitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis ...	...	2	...	1	3	2	...	2	...	...	...	...	...	...	...	...	...
Pneumonia (all forms) ...	1	1	3	6	11	11	10	6	5	2	5	2	...	6	6	3	...
Influenza ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteritis ...	...	1	...	3	4	4	...	2	...	1	1	2	...	1	1	1	...
Gastritis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Syphilis ...	...	...	...	1	1	...	2	...	1	...	...	...	...	...	...	...	...
Rickets ...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Found dead ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation, overlaying ...	...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
Injury at birth ...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Atelectasis ...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...
Congenital malformations ...	...	...	...	...	21	...	...	...	...	...	...	...	...	...	...	...	...
Premature birth ...	...	...	...	...	19	4	2	...	1	...	...	...	...	...	...	...	...
Atrophy, debility & marasmus ...	...	...	...	...	61	10	4	...	...	...	...	...	...	...	...	...	...
Other causes ...	...	...	...	...	6	1	1	...	2	2	1	...	...	...	...	...	...
...	7	...	1	1	9	1	2	3	1	1	1	2	...	...	1	...	...
Totals ...	139	23	15	21	198	39	19	16	13	11	11	13	8	14	11	6	359

# MATERNAL MORTALITY 1890-1930.

DIAGRAM 5.







### Maternal mortality.

Since 1928 each maternal death in the city has been specially investigated and reported upon to the Ministry by Dr. M. G. Hughes, assistant medical officer for maternity and child welfare, who deals with the results of these enquiries in her report on the work of her department on page 56. During 1930, 22 mothers died from causes directly connected with child birth, equal to a maternal mortality rate of 3.57 per 1,000 births, compared with 4.43 in 1929, which was an abnormally high rate for Bristol. Of these 22 deaths of mothers 9 were due to puerperal infection. Diagram 5, facing this page, shows that our maternal death rate is generally below that for the rest of the country.

### Heart Disease.

#### *Deaths and death-rates.*

	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
No. of deaths	421	429	506	465	543	554	620	786	852	1,018	878
Death rate per 1,000 population ...	1.11	1.12	1.32	1.20	1.40	1.43	1.61	2.04	2.18	2.61	2.25

#### *Deaths in quarters, 1930.*

Disease.	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Influenza ...	11	8	3	4	26
Heart disease ...	229	200	204	245	878
Respiratory disease... (including bronchitis and pneumonia).	187	86	65	128	466

Last year in Bristol, 878 people were certified as having died from heart disease. This figure represents 19.37%, or one in five of all deaths, and a death rate of 2.25 per 1,000. This is a decrease on the previous year when influenza was prevalent during the first quarter.

In the classification of deaths, heart disease takes precedence over respiratory diseases. Many deaths resulted from cardiac complications of respiratory diseases or vice versa, and in such cases the deaths would be classified under heart disease.

### Cancer.\*

#### *Deaths and death-rates.*

	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
No. of deaths	433	482	466	509	493	590	483	552	568	544	595
Death rate per 1,000 population ...	1.14	1.26	1.21	1.32	1.27	1.32	1.26	1.43	1.45	1.39	1.52

\* Registrar General's figures.

There were 595 deaths from cancer during the year 1930. This gives a death rate per 1,000 of 1.52 and represents 13.3%, or one in  $7\frac{1}{2}$  of all deaths compared with one in nine of all deaths last year.

The following table shows the cancer deaths in 1930 by age and sex groups :—

1930	0—	5—	15—	25—	45—	65—	75—	Total
Male ...	...	1	2	10	116	107	43	279
Female ...	1	...	1	37	128	91	58	316

When this table is compared with that for 1929 it is found that 30 more deaths from cancer have occurred in males between the ages of 65 and 75 years.

### Influenza.

#### *Deaths at ages, 1930.*

Under 1	1-5	5-15	15-25	25-45	45-65	65—	Total
...	...	...	1	5	9	11	26

#### *Deaths in quarters—1930.*

1st quarter	2nd quarter	3rd quarter	4th quarter	Total
11	8	3	4	26

Influenza, like measles, attacks communities in waves of intensity followed by short periods of comparative immunity until the natural resistance of the community again gives way. The prevalence of influenza in the spring of 1929, which caused 251 deaths during that year, was followed in 1930 by 26 only certified as due to influenza. The epidemic of 1927 which caused 245 deaths was followed by 56 deaths in 1928. As a further proof that influenza is very fatal amongst middle-aged and elderly people 77% of the 26 deaths last year occurred in people over 45 years of age (84% in 1929).

### Bronchitis, pneumonia and other respiratory diseases (including pleurisy, empyema, etc.).

#### *Deaths at ages—1930.*

Disease.	Under 1	1-5	5-15	15-25	25-45	45-65	65—	Total
Bronchitis ...	14	5	1	1	4	28	99	152
Pneumonia ...	69	30	4	16	25	61	67	272
Other respiratory diseases ...	...	2	2	2	4	17	15	42
Total ...	83	37	7	19	33	106	181	466

*Deaths in quarters—1930.*

Disease.	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Bronchitis ... ..	72	21	18	41	152
Pneumonia ... ..	105	59	37	71	272
Other respiratory diseases ... ..	10	6	10	16	42
Total ... ..	187	86	65	128	466

Three important facts are demonstrated by the above tables :—

- (a) that respiratory diseases are most fatal in people over 65 years of age during which period 39% of the deaths occurred,
- (b) that the deaths occurred mostly (40%) during the first or winter quarter of the year.
- (c) although the total number of deaths from these diseases was much less than was the case in 1929 the figure for "under 1" is the same and that for the fourth quarter is 26 more than in 1929. The explanation is to be found in the fact that measles was prevalent during the last quarter and probably accounted for several of the cases.

As has been already mentioned, this great group of diseases accounted for 466 deaths in Bristol during 1930, giving a percentage of all deaths of 10.28 and a death rate of 1.20 per 1,000.

**Accidents as a cause of mortality.**

The number of accidents was higher again in 1930. The total number of deaths due to vehicular traffic was 25, giving a percentage of 2.6 approximately of the number of accidents that occurred.

The following table has been supplied by the chief constable :

	Horse- drawn vehicles	Mechanically propelled vehicles				Pedal cycles	Total accidents
		Omni- buses and motor coaches	Tramcars and trackless trolley vehicles	Other vehicles	Total		
ACCIDENTS							
Fatal ...	1	3	1	16	20	4	25
Non-fatal	21	28	27	586	641	229	891

## II.—GENERAL PROVISION OF HEALTH SERVICES.

### Officers.

The public health officers of the authority have been enumerated as whole-time and part-time officers on page iv of this report, whilst the staffs of the various sections will be found at the commencement of their respective sectional reports. All officers of the local authority hold the requisite certificates or qualifications required for their appointments.

### Nursing in the home.

Nursing the sick in their own homes is provided in Bristol solely by private societies and institutions, as follows :—

#### (a) *General.*

Bristol and Clifton district nurses' society ...	31	nurses
Fishponds district nursing association ...	3	nurses
Kingswood and district nursing association	12	nurses

Nurses are provided by the churches of St. Mary Redcliffe ; St. Gregory's, Horfield ; St. Michael's, Windmill Hill ; St. Barnabas, City Road ; St. Thomas, Eastville, and Temple Church, for nursing the sick in these parishes. District nurses are also working in Brislington, Shirehampton, Avonmouth and Westbury-on-Trym.

Parts of the city, however, remain unprovided with district nurses, some of these districts being Cotham, Bishopston, Lower Horfield, St. Andrew's, parts of Bedminster and Speedwell.

#### (b) *Infectious diseases.*

The Council has entered into arrangements with the Bristol and Clifton district nurses' society for nursing cases of puerperal fever and puerperal pyrexia at home.

### Midwives.

Particulars with regard to the number of midwives practising in the area, their employment and supervision is incorporated in the report on maternity and child welfare (see page 54).

The absence of a midwife in the Avonmouth and Shirehampton district has been met during the year by the employment of a qualified midwife. This midwife is guaranteed by the Council the minimum income of £160 per annum.

### Poor Law medical out-relief.

No change has been made in regard to the policy of medical out-relief which is under the Public Assistance Committee.



The following is a list of officers engaged on this work :—

District	Name.	Average number of attendances per annum	Remarks.
1	Evans, J. M. (temporary)	2,441	Surgery provided by Committee.
2	Hall-Beatson, D. (temporary)	2,150	do.
3) 4)	Roberts, J. A. L.	3,200) 4,500)	do. Inclusive salary as medical officer to Eastville Institution, Children's Homes and 2 relief districts.
5	Foss, E. V.	2,616	Surgery provided by Committee.
6 (part)	Green, S. B.	2,500	Surgery provided by Committee at Horfield. Uses own surgery at Westbury
6a (part)	Browne, F. W. (temporary)	3,950	Provides own surgery at Shirehampton.
7	Mundy, G. S. (temporary)	4,120	Surgery provided by Committee.

Owing to the redistribution of the population of the city through the development of new housing estates, it is impossible to state the population for which these officers are responsible.

#### Laboratory facilities.

The laboratory arrangements for the examination or analysis of clinical material, water, milk and foodstuffs are as follows :—

(a) In the department of pathology at the Bristol University under the direction of Professor I. Walker Hall, examinations of—

Faeces, urine, etc, for typhoid and dysentery organisms.

Blood, lochia, for puerperal sepsis, typhoid, syphilis, etc.

Cerebro spinal fluid.

Foodstuffs (special).

Animal inoculation tests for diphtheria virulence and tuberculosis in milk.

Rats for possible plague infection.

This work is carried out on a fee basis.

(b) In the city chemical and bacteriological laboratories at 36, Queen Square, under the direction of the public analyst (Edward

Russell, Esq., B.Sc., (Lond.), F.I.C., F.C.S.) routine examinations of diphtheria swabs, sputa, milk, water, food and drugs, rag flock, etc., fertilisers and feeding stuffs.

The public analyst issues a separate report containing full particulars of the nature and number of samples submitted for analysis during the year.

(c) In addition the municipal tuberculosis dispensaries under the direction of the tuberculosis officer (Dr. C. J. Campbell Faill) examine sputa of patients attending the dispensaries.

(d) Dr. A. D. Fraser, pathologist to the Royal Infirmary was appointed by the late Board of Guardians as part-time pathologist to Southmead Hospital and to the public assistance institution (Stapleton). Dr. Fraser is responsible for all the pathological work required at these institutions.

The table below summarising the work for the health department at these laboratories during the year shows the number of specimens examined to be 26,389 as compared with 21,312 in 1929, an increase of 5,077 mostly due to the extra number of diphtheria swabs examined. Details of the results of these examinations will be found in the sections dealing with the diseases concerned.

#### PATHOLOGICAL, BACTERIOLOGICAL AND CHEMICAL EXAMINATIONS.

Nature of specimen or sample examined.	At Bristol University Laboratory	At City Laboratories	Total
Diphtheria—			
Virulence tests ... ..	13	—	13
Swabs ... ..	477	17,751	18,228
Enteric fever, including paratyphoid A. and B.—			
Widal ... ..	173	—	173
Faeces and urine ... ..	12	—	12
Tuberculosis			
Sputum ... ..	2	1,625	1,627
Cerebro-spinal fluid ... ..	1	—	1
Dysentery—			
Faeces and blood ... ..	2	—	2
Suspected plague—			
Pus ... ..	2	—	2
Venereal disease—			
Bacteriological ... ..	3,485	—	3,485
Wasserman reaction ... ..	2,052	—	2,052
Milk (Graded: & for tuberculosis)	52	126	178
Meat ... ..	2	—	2
Food and drugs ... ..	—	1,400	1,400
Fertilisers and feeding stuffs ... ..	—	13	13
Maize starch ... ..	—	1	1
Oleo stearine ... ..	—	1	1
Rag flock ... ..	—	2	2
Well water ... ..	—	7	7

## Hospitals.

The following is a list of hospitals (other than private hospitals) together with the accommodation available for the area. Those marked (c) are provided wholly by the Council and those marked (p) partly by the Council in the form of grants or by payment of maintenance charges.

Name of Hospital.	Situation.	Purpose.	Beds.
1. Ham Green hospital (c) Ham Green sanatoria (c)	Pill, nr. Bristol do.	Infectious disease. Tuberculosis (early & advanced)	260*
2. Novers Hill (c)	Bedminster	Smallpox. (also used for con- valescent scarlet fever (40 beds) or tuberculosis (36 beds) when not required for smallpox).	136 47*
3. Frenchay Park (c)	Frenchay, near Bristol.	Tuberculosis (children under 16)	100 (Extension of 65 beds opened).
4. Southmead (c)	Southmead	(See 1, 2, 3, 4, 6, 7, 9, 10, 11, 12, 13, 14, below).	672.
5. Bristol Mental (c)	Fishponds	Mental disease	1,049.
6. Winsley (p)	Limpley Stoke, near Bath	Early pulmonary tuberculosis	119 (Bristol, beds—58)
7. Cossham Memorial (p)	Kingswood	(See 1, 2, 3, 6, below)	100 (Bristol, beds, 9) for non-pulmon- ary tuberculosis
City cases of tuberculosis have also been treated at the following :—			
8. Orthopaedic (p)	Winford	Non-pulmonary tuberculosis	Average daily occupa- tions, 1930, 16.5
9. Heatherwood and Melton Lodge Con- valescent (p)	Ascot	do.	} 3.7
10. Treloar (p)	Great Yarmouth	do.	
	Alton	do.	

\* At 144 square feet per bed.

**Hospitals—continued.**

Name of Hospital.	Situation.	Purpose.	Average daily occupations 1930
11. Wingfield (p)	Headington, Oxford	Non-pulmonary Tuberculosis	0.9
12. Nordrach-on-Mendip (p)	Blagdon	Pulmonary tuberculosis	0.9
13. Morland Hall (p)	Alton	Non-pulmonary tuberculosis	0.9
14. Burrow Hill Colony (p)	Frimley	Training and treatment (tubercular youths)	0.6
15. North Devon Convalescent Children's Home (p)	Lynton	Non-pulmonary tuberculosis	0.4
16. Leysin Sanatorium (p)	Switzerland	Non-pulmonary tuberculosis	0.1
17. Bristol Maternity (p)	50, Southwell St.	Maternity	Beds 32
18. Grove House Home (p)	148 Redland Rd.	do.	12
19. Bristol General (p)	Guinea Street	(See 1, 2, 3, 4, 11, 14, 15, 16, 17 below).	246
20. Bristol Royal Infirmary (p)	Maudlin Street	(See 1, 2, 3, 4, 5, 10, 11, 12, 13, 14, 15, 16, 17, 18 below)	414
21. Bristol Women and Children's	St. Michael's Hill	(See 1, 2, 10, 17 below)	76 (Extending to 120)
22. Bristol Homoeopathic	Tyndalls Park	(See 1, 2, 3, 6, 11, 17 below).	52
23. Bristol Eye	Maudlin Street	Ophthalmic	45
24. Eye Dispensary	Orehard Street	Ophthalmic	4
25. Queen Victoria Convalescent Home	Durdham Downs	Medical and Surgical	91

1. General medical.
2. General surgical.
3. Children.
4. Maternity.
5. Venereal disease.
6. Tuberculosis.
7. Chronic sick.
8. Mental.
9. Mental deficiency.
10. Orthopaedic.
11. Ear, nose and throat.
12. Puerperal fever and pyrexia.
13. Ophthalmia neonatorum.
14. Isolation.
15. Ophthalmic.
16. Skin.
17. Gynaecological.
18. Cancer.

The beds at the hospitals and sanatoria wholly provided by the Council are not available in the ordinary way to persons resident outside the city. Medical officers of health of adjacent districts



## Beds available and special departments established in Bristol Hospitals.

Beds provided at	By LOCAL AUTHORITY.										By VOLUNTARY AGENCIES.									
	Ham Green		Novers Hill	Frenchay Park San.	Southmead	Bristol Mental	Winsley San.	Royal Infirmary	General Hospital	Women and Children's Hospital	Cossham Hospital	Homoeopathic	Orthopaedic	Eye Hospital	Queen Victoria Conv. Home	Maternity Hospital and Home	Grove House Home	Eye Dispensary		
	Hospital	San.																		
FOR	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
1. General medical ...	...	...	...	...	...	...	...	...	45	37	36	46	29	15	15	12	...	...		
2. General surgical ...	...	...	...	...	...	...	...	...	63	59	72	32	41	30	24	12	...	...		
3. Children ...	...	...	...	...	...	...	...	...	60	...	16	...	In 1 & 2	6	...	12	...	...		
4. Maternity ...	...	...	...	...	...	...	...	...	...	27	...	12	...	...	...	In 10	6	...		
5. Venereal disease ...	...	...	...	...	...	...	...	...	6	10	...	...	...	...	...	...	...	...		
6. Tuberculosis ...	...	...	74	62	...	...	...	...	...	...	...	...	...	...	...	...	32	...		
7. Chronic sick ...	...	...	...	...	...	...	...	34	24	...	...	...	...	5	5	4	...	...		
8. Mental ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
9. Mental deficiency ...	...	...	...	...	...	...	...	495	554	...	...	...	...	...	...	...	...	...		
10. Orthopaedic ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
11. Ear, nose and throat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
12. Puerperal fever and pyrexia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
13. Ophthalmia Neonatorum ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
14. Isolation ...	260	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
15. Ophthalmic ...	...	...	...	...	47	...	...	...	...	...	...	...	...	...	...	...	...	...		
16. Skin ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
17. Gynaecological ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
18. Cancer ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
TOTAL BEDS ...	260	136	47	100	672	1,049	58	414	274	76	100	52	60	45	91	32	12	4		
SPECIAL DEPARTMENTS—																				
X-ray ...	...	...	...	...	Yes	Yes	...	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	...		
Dental ...	...	...	...	...	...	Yes	...	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	...		
Ophthalmic ...	...	...	...	...	...	Yes	...	Yes	Yes	Yes	Yes	Yes	Yes	...	...	...	...	...		
Massage, electrical and remedial exercises ...	...	...	...	...	...	Yes	...	Yes	Yes	Yes	...	...	Yes	...	Yes	...	...	...		
Ante-natal, etc. ...	...	...	...	...	...	Yes	...	Yes	Yes	Yes	...	...	Yes	...	...	...	...	...		
Light ...	Yes	...	...	...	...	Yes	...	Yes	Yes	Yes	...	...	...	...	...	...	...	...		
Gynaecology ...	...	...	...	...	Yes	...	...	Yes	Yes	Yes	...	...	...	...	...	...	...	...		
Dermatology ...	...	...	...	...	...	...	...	Yes	Yes	Yes	...	...	...	...	...	...	...	...		
Cancer ...	...	...	...	...	...	...	...	Yes	Yes	...	...	...	...	...	...	...	...	...		
Radium ...	...	...	...	...	...	...	...	Yes	Yes	...	...	...	...	...	...	...	...	...		
Venereal ...	...	...	...	...	...	...	...	Yes	Yes	...	...	...	...	...	...	...	...	...		
Heart ...	...	...	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	...	...		
Mental ...	...	...	...	...	...	...	...	Yes	Yes	...	...	...	...	...	...	...	...	...		
External midwifery ...	...	...	...	...	...	...	...	Yes	...	...	...	...	...	...	...	...	...	...		
Outpatients ...	...	...	...	...	...	...	...	Yes	Yes	...	...	...	...	...	...	...	...	...		
Ear, nose and throat ...	...	...	...	...	...	...	...	Yes	Yes	Yes	Yes	Yes	Yes	...	Yes	...	...	Yes		





occasionally ask for accommodation for infectious disease and if beds are available non-residents are admitted on acceptance by the responsible local authority of liability for payment of ambulance charges, operation fees and maintenance charges.

The management of the city isolation hospitals, Frenchay Park Sanatorium and Southmead Hospital has been delegated by the Council to the Health Committee ; the Bristol Mental Hospital to the Mental Hospital Committee under the Lunacy Acts, and Winsley Sanatorium is governed by a Board consisting of 13 members appointed by the Bristol City Council, 8 by the Wiltshire County Council and 3 by the Bath City Council. All other hospitals, etc., referred to in the table are governed by private boards of management on some of which civic representatives have seats.

The following table indicates where possible the number of beds available for each sex in the various Bristol hospitals, the class of case admitted and the facilities provided for x-ray, dental, ophthalmic, massage, light treatment and ante-natal care. The arrangements made by the Council for pathological work in the area are indicated on page 40.

## Maternity and Nursing Homes.

### Staff.

Medical inspector	...	Dr. M. G. Hughes.
Nurse inspector	...	Miss W. M. Richards.

The Nursing Homes Registration Act, 1927, came into operation on 1st July, 1928. 32 homes, including homes already registered under the Midwives and Maternity Homes Act, 1926, have been registered and 8 exemptions under section 6 have been granted.

	Maternity Homes.	Other Nursing Homes.
No. of applications for registration	10	41
Applications withdrawn	1	6
No. of homes registered	8	24
Applications pending	—	5
No. of orders made refusing or cancelling registration	1	6
No. of appeals against such orders	—	—
No. of cases in which such orders have been :		
(a) Confirmed	—	—
(b) Disallowed	—	—
No. of applications for exemption from registration	1	10
No. of cases in which exemption has been :		
(a) granted	—	8
(b) withdrawn	—	2
(c) refused	1	—

Byelaws on the lines of the model byelaws and in accordance with section 4 of the Nursing Homes Registration Act, 1927, have been approved by the Ministry of Health.

By the operation of this act it has been possible to bring about marked improvement in several of the nursing homes especially in regard to the following matters :—

- Nursing staff — Many cases staff increased, and state-registered nurses insisted on. Night nurses are required before registration is granted.
- Domestic staff — Increased.
- Numbers — Overcrowding was frequently found, especially in chronic medical homes. This has been corrected.
- Type — Chronic medical and maternity cases may not be nursed in too close proximity, with the result that in one home maternity nursing was prohibited, and in another maternity nursing alone was allowed. In some cases mental cases were found which were not known to the Board of Control.
- Structure — General sanitary improvements have been brought about in insisting on satisfactory sluices and W.C.'s being provided, also better provision for ventilation of geysers, sufficient bathrooms and properly ventilated and sanitary larders.
- Equipment — This was found frequently to be unsatisfactory.

Fire appliances – Almost everywhere improvements have been obtained either by additions or alterations or the provision of outside staircases. In some instances it has been necessary to have the staff instructed in the use of extinguishers.

The services rendered by the fire brigade under Superintendent Cade have been invaluable to us in regard to this problem.

Other general improvements on the following lines have been brought about :—

Electric bells by bedside.  
 Carpets removed from maternity wards.  
 Walls distempered or painted instead of paper.  
 Accommodation for staff improved.  
 Venetian blinds removed.  
 Superfluous curtains, hangings, etc., removed.  
 Feather beds removed in case of maternity patients.  
 Lock-up poison cupboards.  
 Glazed sinks instead of earthenware.  
 Bins for soiled dressings, refuse, etc.  
 General cleanliness definitely improved.

There is no doubt that the operation of this act, in several instances, is resulting in marked improvement in the sanitation and general service given at our nursing homes.

### **Institutional provision for unmarried mothers, illegitimate infants and homeless children.**

(a) <i>Unmarried mothers (first babies only)</i>		<i>Beds and cots.</i>
Bristol Maternity Hospital, 50 Southwell Street		12
Grove House Home, 148 Redland Road	...	12
Salvation Army Home, 10 Ashley Hill	...	31 (21 cots)
(b) <i>Babies' homes.</i>		
Victoria Gibbs Memorial Home, Somerset Street, Kingsdown (babies up to 2 years old)	...	35
Babies' Homes, Downend (babies up to 3 years old)	... ..	40

### **Institutional provision for the care of mental defectives.**

#### *Staff.*

Supervising officer ... W. E. Price  
 Domiciliary visitors, 2 ; clerks, 1.

The certified institutions in and about Bristol are :—

Stoke Park, Stapleton	... ..	778	beds
Beech House, Stoke Park	... ..	89	„
Heath House, do.	... ..	90	„
Royal Victoria Home, Horfield	... ..	36	„
Hanham Hall, Hanham	... ..	220	„
Leigh Court, Leigh Woods	... ..	240	„
Clevedon Hall, Clevedon	... ..	108	„

These institutions are for all cases certified under the Mental Deficiency Act, 1913, and are divided into beds for males and females, certified for 1,561. They are all established and registered under the incorporation of national institutions for persons requiring care and control and are under the supervision of the Board of Control (Local Supervising Authority, Gloucester).

In addition, 793 beds for the class of case specified below are provided at :—

Brentry Certified Institution, Westbury-on-Trym, for males above the age of 18 years...	327	beds
Chasefield Laundry Home, 874 Fishponds Road, for adult females	41	„
Southmead Institution, children only	100	„
Stapleton Institution, all classes	300	„
Royal Fort Home, certified as a "hostel" for females being prepared for domestic service	25	„

Brentry certified institution, established by a combination of local authorities, is administered by a joint board of management.

The Chasefield Laundry Home and Royal Fort Home have been established by the Bristol Diocesan Society, and the Southmead Institution and Stapleton Institution by the Bristol Corporation (Local Supervising Authority—Bristol).

The beds above for Stapleton include 87 beds for cases of minor sickness which can be nursed in the institution concerned. All cases of serious illness are sent to Southmead Hospital for treatment.

An occupation centre for employment of mentally defective boys and young men has been established at 15, Park Row, Bristol, and centres for girls and women at Barton Hill, Lewins Mead and Bedminster. Supervision and employment is provided by day for the patients, and they are returned to the care of their own people by night ; there are 100 defectives in attendance.

#### *Certification.*

The following gentlemen have been approved by the local authority for the purpose of giving certificates under the provisions of the Mental Deficiency Act, 1913 :—

Dr. J. O. Symes, in all cases.

Dr. H. L. Ormerod, Westbury-on-Trym, in all cases of adults.

Dr. Newman Neild, all cases.

In practice Dr. J. O. Symes certifies in all cases with an additional certificate from Dr. Ormerod or Dr. Newman Neild.

In July 1929, the Council called for a report from the Mental Hospital and the Mental Deficiency Act Committees, upon the desirability of co-ordinating the medical services relating to the present and future mental work of the Council, and in May 1931 it was decided that for the purpose of securing greater co-operation and efficiency (a) joint meetings of representatives of both committees and of the Public Assistance Committee be held at least every half-year, (b) Dr. Barton White, the medical superintendent under the Lunacy Acts, shall in addition act in an advisory capacity in all matters affecting mental welfare in the city, (c) domiciliary



work connected with all mental defectives be placed under the control of the medical officer of health, and (d) the supervising officer under the Mental Deficiency Acts, continue in that capacity under the direction of the medical officer of health. The Mental Deficiency Act Committee gave effect to recommendations (c) and (d) as from the 23rd December, 1930.

### *Mental Deficiency.*

During the past few years mental deficiency has attracted much attention from prominent workers in all fields social and scientific. One factor has become very apparent, namely, that mental deficiency is essentially a public health problem, and if progress is to be made in the prevention of mental deficiency, the work must be closely linked with maternity and child welfare.

Until 1913, English law only recognised two degrees of mental deficiency—the idiot and the imbecile. The Mental Deficiency Act of 1913 provided for idiots, imbeciles, feeble minded persons and moral imbeciles, or, as they are now called, moral defectives.

Mental deficiency means “a condition of arrested or incomplete development of mind existing before the age of 18 years where arising from inherent causes or induced by disease or injury.” There is no reason, therefore, why arrested growth of some part of the body should be looked upon in a different light or treated differently from mental deficiency.

In the ascertainment and classification of mental deficiency in a child, deviation from the average normal capacity is determined and the result expressed as ‘intelligent quotient’ or ‘mental ratio.’ The tests supplied are not ordinary educational tests, but are rather to ascertain the ability to utilise knowledge when situated under standardised conditions. They are merely aids to the examining medical officer and experience has proved them to be invaluable in the case of the child. In the case of the adult, the only really satisfactory criterion of mental deficiency is a social one. A person suffering from a degree of incomplete mental development which renders him incapable of independent social adaptation, and which makes it necessary for him to have external care, supervision and control, is a mental defective.

For many reasons it is obvious that ascertainment of the child defective is of the utmost importance for the solution of this problem ; thus it is possible to train and protect the child that it may not, with safeguards, be a social failure. For the school child ascertainment is in the hands of the school medical officer who depends largely upon information received from the head teacher. Special school training is provided for the educable mental deficient within the meaning of the Education Act, 1921, but where the case is uneducable, it is handed over to the care of the Mental Deficiency Acts Committee.

Roughly there are two types of mental deficient, viz. :—

- (a) those who require institutional care ;
- (b) those who do not require institutional care but can be trained outside whilst living in their homes or under guardianship.

Cases for institutional treatment are selected because of unsuitability of home circumstances, lack of provision for training,

their own physical and mental characteristics amongst which may be grouped difficult and unstable temperaments, unfit for family life.

Many mental defectives, however, have good home conditions and are easily supervised and controlled. In some instances they find plenty to do at home, but others attend occupation centres. Adults are ascertained mostly through the following channels: Public Assistance Committee, police, medical practitioners, N.S.P.C.C., social societies, rescue homes, and officials of the several departments of the health services, and occasionally from the parents and relatives of the defectives.

On the 31st December, 1930, the number ascertained in Bristol was 1,104.

I am grateful to Mr. W. E. Price for the following account of the committee procedure :—

The Mental Deficiency Act Committee, through a sub-committee, meet monthly for the purpose of deciding how each case that has been ascertained between meetings shall be dealt with—they may direct that the cases be dealt with in either of the following ways :—

Institution  
Guardianship  
Supervision  
Occupation Centres.

If it is directed that cases be sent to an institution the only available institutions at the moment are Southmead for juveniles and Stapleton for adults, with the exception that very low grade juvenile defectives of the ' idiot ' class are provided for at Stapleton. Hortham Colony, which will provide for 600 cases of all classes is now in the builders' hands and will be ready for the reception of cases towards the end of 1931. A statement as to the number of cases in institutions on January 1st, 1931, will be found in the statistics.

#### *Guardianship.*

The placing of a defective under guardianship requires legal procedure and imposes legal responsibility upon the " guardian " and the local authority. To comply with the procedure two medical certificates are necessary and examination by a magistrate. The local authority may contribute towards the maintenance of a patient under guardianship and often cases are placed under guardianship solely for this reason, free medical attendance is provided and each case is visited by an authorised person at regular intervals, a book is provided for the report of each visit by medical and lay representatives of the local authority and is signed by the inspectors of the board of control who visit once in each 6 months. The advantage of guardianship is not fully appreciated as yet, as is evidenced by the fact that throughout the country, 1,150 cases only have been placed under guardianship of which 35 are in Bristol.

#### *Supervision.*

This is an important part of the committee work, and entails a great deal of work, a visit to a home may mean a matter of minutes or hours and the visits may be at intervals of weeks, months, or 6 months. It is of course apparent that all cases do not require to be dealt with in the same way, the visitor must become a friend of the family, supervision is a particular instance in which officialdom

must be left in the background. Much information becomes available from friendly conversation and other families are encouraged to seek the committee's assistance. The offer of attendance at occupation centres if of great assistance and a preliminary discussion helps towards creating a friendly feeling. The natural hesitation of parents and relatives to recognise the seriousness of a defective's mental condition, or even if recognising it, to part with the defective, their ignorance both of the possibilities of training in modern institutions, and of the fact that even a minor degree of mental retardation is one of the most hopeless handicaps in life, and the deeply rooted dislike to anything that savours of detention, all give rise to home discussions with the parents and relatives. The effective control of a defective at home does inevitably mean a restriction in his complete freedom to go and come as he pleases, to make what friends he chooses, to select his manner and means of entertainment. Occupation centres have filled a most useful purpose for the visitors, lack of occupation centres is a serious handicap in home supervision. For defectives of stable temperament who appear capable of being controlled outside an institution, and who are in no way anti-social, or a burden, supervision with the assistance of occupation centres may meet the circumstances, but the home must be of a good type, even if poor and humble, and the parents and relations must co-operate, otherwise supervision loses its value.

*Statistical statement, as 1st January, 1931.*

	Males	Females	Licence M. F.		Total
Stapleton ... ..	118	114	6	11	249
Southmead ... ..	43	34	5	5	87
Chasefield ... ..	—	9	—	—	9
Stourbridge ... ..	13	2	—	—	15
Fairwarp ... ..	—	3	—	—	3
Stoke Park ... ..	1	5	—	—	6
Exeter ... ..	—	1	—	—	1
Eagle House ... ..	—	1	—	—	1
St. Mary's Home ...	—	7	—	—	7
Monkton Hall ... ..	1	—	—	—	1
Besford Court ... ..	2	—	—	—	2
Dovecot ... ..	—	1	—	—	1
Crathorne ... ..	—	1	—	—	1
Mount Tabor ... ..	—	1	—	—	1
Barkingside ... ..	—	—	—	1	1
Arnos Court ... ..	—	1	—	1	2
Shirley ... ..	—	1	—	—	1
Rampton ... ..	7	10	—	—	17
Royal Fort ... ..	—	10	—	6	16
	185	201	11	24	421
Last month .. ..	182	199	12	23	416
Last year					
Institutions ... ..	421	...	...	...	396
Supervision ... ..	640	...	...	...	599
Guardianship ... ..	33	...	...	...	24
Pending ... ..	10	...	...	...	4
	1,104	...	...	...	1,023

Number ascertained during last five years :—

1926	...	...	...	...	143
1927	...	...	...	...	129
1928	...	...	...	...	108
1929	...	...	...	...	103
1930	...	...	...	...	102

---

The cases ascertained in 1930 have been dealt with as follows :—

Sent to institutions	...	...	46
Placed on supervision list	...	...	48
Under guardianship	...	...	5
No action taken	...	...	3

### Ambulance facilities.

(a) *For infectious, tuberculosis and maternity cases.*

4 motor ambulances (stretcher) maintained by the public health department.

1 motor ambulance (stretcher) by Public Assistance Committee.

(b) *For non-infectious and accident cases.*

8 motor ambulances (stretcher) by Bristol city and marine ambulance corps ;

7 motor ambulances (stretcher) by St. John ambulance.

2 motor ambulances by Education Committee (for invalid school children).

1 motor ambulance (stretcher) by Public Assistance Committee.

The ambulances maintained by the health department for the removal of infectious cases are on duty night and day in shifts, two vehicles being on duty between the hours of 2 and 5 p.m., and one detailed for emergency cases arising between the hours of 10 p.m. and 9 a.m. The staff engaged in this service consists of :—

Removal officers	...	...	2
Ambulance nurses	...	...	2
Drivers	...	...	2

### Clinic and treatment centres.

The following is a list of clinics and treatment centres in the area. Those marked (c) are supported wholly by the Council and those marked (p) partly by the Council in the form of grants or by the payment of maintenance charges.



(1) *Maternity and child welfare* (consultation and treatment).

## (a) Ante-natal clinics—

Municipal (c)	...	...	...	...	9
Bristol General Hospital (p)	...	...	...	...	1
Southmead Hospital (c)	...	...	...	...	1

(b) Infant welfare centres (p) ... .. 25

(c) Mothercraft (lactation) clinic (c) ... .. 1

(d) Day nurseries (p) ... .. 2

(e) Nursery school ... .. 1

(2) *School Clinics* (c) ... .. 4(3) *Orthopaedic Clinic (school)* (c) ... .. 1(4) *Cardio-rheumatic Research Clinic (school)* (c) ... .. 1(5) *Artificial Light Clinics* ... .. 4

Portland Square Dispensary—tuberculosis (c)

Ham Green Hospital „ (c)

Frenchay Park Sanatorium „ (c)

Brunswick Square—non-tubercular diseases of children (c).

(6) *Tuberculosis Dispensaries* (c) ... .. 2(7) *Venereal Disease Clinic* (c) ... .. 1**Local Government Act 1930—Transferred Services.**

The following services were transferred from the late Guardians, in accordance with the provisions of the Local Government Act, 1930 :—

- (1) Vaccination was transferred to the Health Committee.
- (2) Infant Life Protection and the visiting of boarded-out children was passed to the Health Committee and thence handed over to the Maternity and Child Welfare Sub-Committee.
- (3) The Children's Homes were transferred to the Health Committee, subject to the “ general direction and control of the Public Assistance Committee.”
- (4) Southmead Hospital was appropriated by the Council for the treatment of the sick under the Public Health Acts and was transferred to the Health Committee.
- (5) Registration, “ in so far as this work can be performed by a Committee ” was transferred to the Health Committee.

The following services were delegated to the Public Assistance Committee :—

- (1) The relief of the able-bodied poor, residential accommodation being provided at Eastville Institution.
- (2) Poor law lunatics and mental defectives remain at Stapleton institution under the care of this committee.
- (3) Accommodation for casuals is provided at Eastville institution. Medical care of the outdoor sick remains a poor law function under the care of this committee.



### III.—MATERNITY AND CHILD WELFARE.

Report by MARGUERITE HUGHES, M.B., Ch.B.,  
Assistant Medical Officer of Health.

#### Staff.

Chief assistant medical officer	...	M. G. Hughes, M.B., Ch.B.
Assistant medical officer	...	G. Hartley, M.B., B.S., M.M.
"	"	A. A. Craig, M.B., B.S., D.P.H.
"	"	(part-time) L. A. Baker, B.A., M.B., B.Ch., F.R.C.S.I.
"	"	D. M. Pullen, M.B., Ch.B.
"	"	H. L. Shepherd, Ch.M., M.B.
Principal sister	...	Miss L. Elkins.
(also superintendent school nurse)		
Inspector of midwives	...	Miss W. M. Richards.
Superintendent health visitor	...	Miss I. M. Ralph
Health visiting staff, 23; clerks, 6.		

#### Midwives.

Midwives practising in city	...	125
Midwives with training qualifications	...	121
<i>Bona-fide</i> midwives	...	4
Midwives in private practice	...	58
Midwives attached to institutions	...	67

One midwife was subsidised during 1930.

#### Supervision.

Midwives inspected	...	58
Routine inspections	...	196
Unsatisfactory conditions reported...	...	1
Failure to send in C.M.B. forms	...	6

Each midwife in private practice was visited at her house at least four times during the year when her registers, bag, instruments, etc. were inspected; these visits were purposely surprise visits. Some of the midwives were not in the city during the whole year, and, therefore, did not receive four visits. Other visits, in addition to the routine quarterly visits, are made as occasion warrants.

These inspections show that the standard of the work done by these midwives is higher than it was. It is unusual now to find a midwifery bag kept unsatisfactorily; the importance of ante-natal care is more fully appreciated, more frequent visits are paid during pregnancy, whereas formerly one visit was thought to be sufficient.

Twenty-nine per cent. of expectant mothers attending ante-natal clinics are sent by midwives; this figure is not quite as high as it has been. Although it is advisable for midwives to undertake the ante-natal care of their own cases as far as possible, there are many midwives who have not the time or experience for the work. Apart from this, every expectant mother should be further safeguarded by certain examinations which can only be carried out efficiently by a doctor with special experience in this work.

Many midwives now welcome the inspector, looking upon her visit as an opportunity for obtaining advice and help. It is pleasing to note that more midwives are referring cases where there are feeding difficulties to this department.

During the year 266 midwives' cases were visited before the tenth day ; much practical advice is given as a result of this part of the supervision.

No midwives were interviewed by the medical inspector, or reported to the Central Midwives' Board.

*C.M.B. Forms received.*

	1929	1930
Form A —medical help ... ..	1,260	1,250
„ B —deaths ... ..	27	36
„ C —stillbirths ... ..	73	61
„ D —laying out the dead ... ..	7	7
„ E —liability of infection ... ..	29	25
„ F —artificial feeding ... ..	41	53

An analysis has been made of “ A ” forms received during the year. The following table indicates the nature of the conditions for which medical help was called in :—

Threatened abortion ... ..	3
Abortion ... ..	17
Albuminuria ... ..	34
Prematurity ... ..	16
Ante-partum haemorrhage ... ..	39
Delayed labour ... ..	121
Complicated labour ... ..	62
Ruptured perineum ... ..	325
Adherent placenta ... ..	30
Post partum haemorrhage ... ..	20
Raised temperature ... ..	70
Feebleness of child ... ..	33
Discharging eyes... ..	269
Rash ... ..	3
Other causes ... ..	208
Total ... ..	1,250

**Claims for medical fees.**

There were 297 claims made by medical practitioners for attendance on emergencies at confinements under section 14 of the Midwives' Act, 1918 ; this is an increase of 27 over 1929.

**Compensation to midwives for loss of work.**

A midwife can claim compensation to the amount of half her fee if she loses one of her cases because she is in attendance on a septic case. There were no claims during the year.

The committee has also decided that a midwife can claim compensation for a case which she has sent to an ante-natal clinic if that case, owing to some abnormality, has to be referred to an institution for confinement. Ten such claims were received during the year.

### Maternal mortality.

The causes of the 22 deaths in the city were as follows :—

Septic abortion ... ..	2
Abortion—haemorrhage ... ..	1
Pulmonary embolism ... .. (1 following abortion)	3
Puerperal sepsis ... ..	7
Post-partum shock ... ..	2
Eclampsia ... ..	4
Uraemia ... ..	1
Pyelo-nephritis ... ..	1
Albuminuria ... ..	1

Every death is as a rule fully investigated. The following details were obtained concerning the cases investigated :—

Ages ...	{ 20—30	...	9
	{ 30—40	...	7
	{ 40—50	...	4
Primiparae ... ..	...	...	6
Multiparae ... ..	...	...	14
Midwives' cases ... ..	...	...	4
Doctors' cases ... ..	...	...	8
Institution cases ... ..	...	...	8
Ante-natal care—nil	...	...	3
	doubtful	...	1
	once only	...	1
	satisfactory	...	15
Cases not investigated ... ..	...	...	2

These figures, though reduced, still remain high. The fact that a number of stillbirths and neo-natal deaths must be associated with these, means that the total loss of life is considerable. In addition there is the still larger amount of illness and injury which is unrecorded. The importance of ante-natal care has still to be fully realised, particularly as regards regular attendance, especially in the late months.

It will be noticed that the death rate is high amongst multiparae ; a mother who has already come through one or more confinements successfully fails to see the importance of ante natal care when she becomes pregnant again. Even when she has been examined and some abnormality discovered, she shows reluctance to avail herself of institution treatment.

The report of the departmental committee on maternal mortality and morbidity states that a considerable number of deaths could be traced back in the first place to failure on the part of the patient or her friends to carry out the treatment advised.

Assistance is available for every mother for her pregnancy and confinement. It is, therefore, essential that the general public shall be taught to realise the extreme importance of these questions.

# **The Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926.**

Eighty-nine notifications of puerperal fever and pyrexia were received during the year, of these 18 were notified as puerperal fever and 71 as puerperal pyrexia.

Of the cases of puerperal fever,

7	were delivered in institutions.
5	„ „ by doctors at home.
6	„ „ by midwives at home.

The causes were detailed as follows :

Sapraemia	...	...	...	8
Septicaemia	...	...	...	5
Septic burn	...	...	...	1
Cause not known	...	...	...	4

Of the cases of puerperal pyrexia—

43	occurred in patients delivered in institutions.
20	„ „ „ at home by doctors.
8	„ „ „ „ midwives.

Investigations were made in 42 cases, and the causes were given as follows :—,

Sapraemia	...	...	...	9
Septicaemia	...	...	...	4
Pyelitis	...	...	...	11
Salpingitis and peritonitis	...	...	...	3
Fibroid tumour	...	...	...	1
Septic caesarian scar	...	...	...	1
Phlebitis	...	...	...	1
Pneumonia and bronchitis	...	...	...	6
Mastitis and breast abscess	...	...	...	4
Septic rash	...	...	...	1
Pharyngitis	...	...	...	1

It would appear that a number of the cases notified as puerperal pyrexia should have been notified as puerperal fever.

The following is a comparative table of cases of puerperal fever notified since 1922 :

Year	Cases notified.	Cases per 1,000 births.	Removed to hospital.	Cases from outside city.
1922	22	2.8	16	—
1923	25	3.2	17	2
1924	43	5.8	34	4
1925	64	8.8	59	10
1926	29	4.0	26	3
1927	27	4.0	21	5
1928	26	3.8	19	11
1929	18	2.7	13	1
1930	18	2.6	8	1



A scheme for assistance in cases of complicated labour, puerperal fever, and puerperal pyrexia has been formulated and approved by the Ministry.

This provides for :

- (a) The calling in of a consultant in cases of puerperal fever, puerperal pyrexia, or complicated labour.
- (b) Bacteriological examinations.
- (c) Hospital treatment.
- (d) Nursing in the home in cases where removal to hospital cannot be arranged.

Arrangements have been made for the examination of swabs from throats of contacts of puerperal fever.

Under this scheme, 44 cases were referred to consultants. Application under (d) above was made in one case only.

### Public Health (Ophthalmia Neonatorum) Regulations, 1926.

Nineteen notifications of ophthalmia neonatorum were received during 1930, the lowest number on record, and six less than in 1929. The cases were visited by a health visitor on the day of receipt of notification as in former years, with the object of securing proper attention by a doctor or institution, and cases were kept under observation to see that prescribed treatment was carried out. Recovery with vision unimpaired is reported in all cases this year.

The following table gives the results of cases notified during the last six years :—

Year	Noti- fica- tions	Treated		Re- cov- ered (vision unim- paired)	Lesser injury to sight	Blindness		Death before re- covery	Result un- known at end of year	Live births noti- fied	Case per 1,000 live birth
		at home	in hospi- tal			both eyes	one eye				
1925	58	52	6	55	nil	nil	1	2	nil	6,931	8.3
1926	48	40	8	41	nil	2*	nil	1	4	6,828	7.02
1927	39	38	1	33	nil	nil	nil	1	5	6,474	6.02
1928	37	29	8	33	nil	nil	1	nil	3	6,554	5.6
1929	25	22	3	25	nil	nil	nil	nil	nil	6,270	3.9
1930	19	15	4	18	nil	nil	nil	1	nil	6,532	3.4

\* These were cases admitted to hospital for treatment from outside the city.

The above figures show a continuous reduction in the case-rate per 1,000 births.

### *Eye cases other than ophthalmia neonatorum.*

Similar care and attention is observed in less serious eye cases reported by midwives or discovered by the district health visitors, and free issues of boracic crystals and cotton wool swabs are made when required. During 1930 the number of such cases dealt with was 365 involving 1835 visits.



The importance of early and immediate treatment for discharging eyes has been repeatedly brought to the notice of all midwives, and it is encouraging to note that during the year 269 "A" forms for medical help were sent in for this condition.

#### **Ante-natal and post-natal work.**

There are nine municipal ante-natal clinics holding twelve sessions per week. The total number of attendances at the clinics was as follows :—

New patients.	No. of attendances.	Average per session.
2,264	10,878	18.4

The mothers attending are examined by specially qualified doctors ; assistance is given by the health visiting staff. Instruction is given on ante natal hygiene, and the importance and management of breast-feeding.

Arrangements have been made for the pathological examination of specimens from patients attending these clinics for the purpose of detecting infection. Arrangements have also been made for the X-ray examination of patients attending the clinics where this is considered necessary.

It is satisfactory to note the earlier attendance at the clinic of expectant mothers, especially in cases of first pregnancies. Many mothers show great interest in the lectures and demonstrations given at every session. The increasing demand amongst these mothers for dental treatment is very satisfactory : the work is most necessary, and appreciation of the benefit is frequently expressed.

It was found necessary to open a clinic at Fishponds to meet the needs of the increased development of the district. This will be referred to later in the report.

Some attempt has been made to deal with an important part of the work ; there are certain expectant mothers who require special treatment. Much ill-health and a liability to puerperal sepsis are the result of symptoms, non-venereal in origin, which occur in certain cases of pregnancy. The mothers themselves frequently ask for such treatment, and those who attended regularly showed definite improvement. This special treatment and post-natal work are both urgently required but cannot be carried out efficiently or to any extent owing to lack of suitable premises.

Thirty-five sterilised maternity outfits have been sold at cost price to expectant mothers at the clinics, and maternity bags have been lent to nine mothers. The garments in these bags were made by the older girls in the elementary schools.

In addition to this municipal ante-natal provision, the Bristol Royal Infirmary, Bristol General Hospital, Bristol Maternity Hospital and Southmead Hospital insist on all women who are to be attended by their maternity staffs coming to their ante-natal clinics.

A grant is made to the Bristol General Hospital towards their ante natal clinic. In return for this the hospital gives special consideration to cases of complicated labour referred to them by the Maternity and Child Welfare Committee.

### Maternity beds.

The number of maternity beds available in the city at the end of 1930 was 103. (For details see page 44).

### Notification of Births Act, 1915.

During the year, 6,785 notifications of births were received under this Act, including 253 stillbirths. Of these, 1,437 cases were notified by doctors, 4,918 by midwives, and 430 by relatives. The sex of the cases was as follows :—

Sex.		Living.	Dead.
Males	...	3,404	134
Females	...	3,128	119
Total	...	6,532	253

### Comparative table of notified births.

Year	Births in institutions and nursing homes.		Births in Southmead Hospital		% of births in all institutions to total births.	% attended by doctors.	% attended by midwives.
	Living	Dead	Living	Dead			
1919	*395		*82		6.4	33.4	60.2
1920	*562		*95		6.6	36.5	56.9
1921	870	61	52	2	11.2	32.0	56.8
1922	1,026	48	52	6	14.4	28.3	57.3
1923	1,198	83	73	3	17.6	26.3	56.1
1924	1,344	81	77	2	20.5	24.5	55.0
1925	1,353	99	67	3	21.1	24.1	54.8
1926	1,552	101	102	3	24.8	23.1	52.1
1927	1,681	107	124	5	28.5	22.7	48.8
1928	1,757	116	123	2	29.2	23.4	47.4
1929	1,685	101	232	18	31.1	22.3	46.6
1930	1,627	113	406	11	31.7	23.6	44.7

\* Dissected figures not available.

### Stillbirths.

In 1930 there were 253 stillbirths notified as against 270 in 1929.

Total number of notifications	...	253
Information obtained	...	240
Information unobtainable	...	13

Doctors' cases—61. Midwives' cases—79. Institution cases—100.

## LEGITIMACY.

Legitimate	...	...	...	239
Illegitimate	...	...	...	1
				— 240

## PERIOD OF GESTATION.

Full time	...	...	...	163
Premature	...	...	...	72 (30%)
Post mature	...	...	...	5
				— 240

Ante-natal treatment received—170 (75%).

CAUSES OF STILLBIRTHS.				1929	1930
TOXAEMIA	Syphilis	...	...	6	1
	Albuminuria	...	...	32	19
	Eclampsia	...	...	—	6
	Other maternal diseases			8	12
MECHANICAL	Placenta praevia	...	...	32	26
	Premature separation of placenta	...	...	—	2
	Prolapse of cord	...	...	6	9
DEVELOPMENTAL	Foetal abnormality	...	...	20	33
	Premature twins	...	...	2	3
TRAUMATIC	Asphyxia	...	...	8	3
	Craniotomy	...	...	2	2
	Intra-cranial haemorrhage			1	—
	Difficult delivery	...	...	64	76
CAUSE UNKNOWN	...	...	...	63	48
Total				241	240

It will be seen that a high proportion of stillbirths occurs with prematurity; in addition to this, out of 180 infants who died under one month, 50 were premature. Satisfactory ante-natal supervision will reduce this death rate by securing the birth of healthier children and by preventing a certain proportion of premature births.

Leaflets containing information as to the treatment of premature babies have been issued to the midwives; mothers are also receiving instruction at the ante-natal clinics. Arrangements have been made for outfits for premature babies to be supplied at cost price.

#### Assistance at confinement.

In 1930 there were 518 applications by patients for assistance at confinement, as follows:—

	1928	1929	1930
Application for maternity beds	16	162	444
Application for midwives' fees	36	36	74
	52	198	518

The increase in these figures is due chiefly to the applications for admission to Southmead Hospital.

### Clinics and treatment centres.

A municipal maternity and child welfare centre was opened at Fishponds on 2nd May, 1930, in the Morley Hall, The Causeway.

One ante-natal and two infant welfare sessions are held weekly. Each of these sessions is well attended. The attendance of babies at one session and of toddlers at the other was found to make for better working; the health visitors responsible for the clinic are those whose districts adjoin the centre. This ensures satisfactory co-ordination and prevents overlapping.

As in other infant welfare centres, consultations, lectures, competitions, etc., are provided. Much useful help is given by voluntary workers in the social side of the work.

The Bristol Infant Welfare Association and Council of Schools for Mothers is responsible for 23 other centres; at two of these the medical officer and health visitor in attendance are supplied by the Maternity and Child Welfare Committee.

This makes a total of nine sessions weekly attended by health visitors at voluntary infant welfare centres.

#### *Attendances at the infant welfare centres.*

	Attended for first time.	Total number of attendances.
Children under 1 year of age ...	1,763	23,640
Children between the ages of 1 and 5 years ... ..	799	32,634
	2,562	56,274

#### *Artificial sunlight clinic.*

Six sessions per week are held, and the attendances last year were :—

New	Old	Total	Average attendance per session.
729	6,014	6,743	24.6

The cases treated are chiefly rickets, anaemia and general debility from various causes. There is no doubt that cases of rickets benefit as a result of this treatment. In the majority of the other cases submitted to treatment the children slept better, ate better and were happier; there was an increase in vitality, a definite improvement in colour, and usually a satisfactory gain in weight.

#### *Mothercraft clinic (infant feeding).*

Four sessions are now held each week. The cases dealt with are those of infants in whom unsatisfactory conditions have arisen as a result of wrong or mismanaged feeding, whether breast or artificial.



The time of one health visitor, who has been especially trained for the purpose, is entirely given up to this work. In addition to attendance at the clinics she has paid 479 visits during the year, and by arrangements with the Bristol Infant Welfare Association has given 37 lectures at infant welfare centres. The number of patients attending the clinic during 1930 were :—

New	Old	Total	Average attendance per session.
575	3,932	4,507	23.9

#### *Minor ailment clinics.*

By arrangement with the Education Committee all cases of minor ailments in children under the age of five can be treated at any of the school clinics, of which there are four in the city. 482 children received treatment at these clinics during the year.

#### *Nursery school.*

The first nursery school for toddlers was opened in 1925 in Rosemary Street, in connection with the Bristol Infant Welfare Association. It has been approved by the Board of Education for grant. It commenced with 12 children, now increased to 30, all in poor physical condition. There has been marked improvement in these children under their new conditions. Some of the cases also attend for treatment at the sunlight clinic.

#### *Day nurseries.*

In addition, there is the Day Nursery at 12 Dowry Square, Hotwells, and the Bristol Day and Night Nursery and Training Centre at 27-29, Ashley Road, where children are taken temporarily, and also as residents during the illness of the mother.

#### **Milk grants.**

Grants of milk are made under the provision of circular 185 of the Ministry of Health, dated 31st March, 1921.

The following table gives particulars of the grants made during the year :

GRANTS.				Total	Cost of milk orders.
Expectant mothers	Nursing mothers	Children under 3 years	Children between 3-5 yrs.		
357	910	1,366	551	3,184	£1,436 5 2



### Dental treatment.

Dental treatment for expectant and nursing mothers, and children up to 5 years of age is carried out at the Council's clinics under the control of the Education Committee.

Particulars of treatment are given in the following table :—

	Year	Expect- ant mothers	Nurs- ing mothers	In- fants	Ex- trac- tions	Anaes- thet- ics	Fill- ings	Dress- ings	Other opera- tions
New cases treated	1927	30	69	170	1,659	Local 188 Gas 319	41	26	26
do.	1928	47	93	191	2,028	Local 266 Gas 436	50	43	31
do.	1929	51	137	252	2,953	Local 272 Gas 592	53	48	64
do.	1930	54	155	302	4,609	Local 355 Gas 986	61	65	43
No. of attend- ances for treatment	1927	142	326	375	Dentures supplied			1927	49
do.	1928	128	487	497	do.			1928	64
do.	1929	146	432	584	do.			1929	106
do.	1930	178	568	997	do.			1930	127

The above table shows a steady increase in this most useful work, evidence that expectant and nursing mothers do definitely appreciate its value.

It is amongst them that advanced dental caries and pyorrhoea are so frequently found, a condition which produces a serious effect, not only on the health of the mother herself, but on that of her child. The extraction of teeth alone would be of very little value without the subsequent supply of dentures. This is usually impossible without the assistance given under this scheme.

The total cost to the Council (including £298 7s. 4d. for dentures) amounted to £607 14s. 10d.

### Diphtheria immunisation.

The number of children immunised against diphtheria from January 1st to December 31st, 1930, was 1,181, and the total attendances 5,704. (See page 106 for detailed report on cases dealt with during the year).

### **Health visiting staff.**

The growth of the work of the department has resulted in a great increase in the work of the health visitors which includes :—

1. First visits and re-visits up to five years of age.
2. Special visits, such as enquiries with regard to non-attendance at clinics, midwives cases reported as suffering from blisters, etc.
3. Investigation of stillbirths, except in doctors' cases when enquiries are made by the medical officer.
4. Tuberculosis visiting. These visits are approximately one sixth of the total visits.
5. Regular visits to all cases of ophthalmia neonatorum and other less serious eye cases.
6. Attendances at ante-natal, sunlight, mothercraft, infant welfare and diphtheria immunisation clinics.

The total number of visits paid by the health visitors was 95,558; this is an increase of over 10,000 in 1929.

### **Training course for health visitors.**

Under the Ministry of Health's Regulations, no woman may, after March, 1928, be appointed as a health visitor for the first time unless she is a trained nurse and holds in addition the Central Midwives Board certificate, and the Ministry of Health certificate for Health Visitors.

In April, 1930, the Health Committee in conjunction with the University of Bristol, inaugurated a training course for nurses who wished to obtain the new health visitors' certificate.

The course is open only to fully trained nurses holding the Central Midwives Board certificate, and comprises lectures and practical work extending over a period of six months. The Health Committee decided, with the permission of the Ministry of Health, to appoint a limited number of pupil health visitors, to whom a salary at the rate of £100 per annum is paid, such pupils to undertake to serve the Council for at least six months after obtaining the health visitors' certificate.

The Health Committee also agreed that health visitors at present in office could attend the course of lectures, and present themselves for the Royal Sanitary Institute examination, and that the fees of successful candidates be refunded.

An extensive course consisting of more than a hundred lectures and tutorial classes was given by the staff of the department in conjunction with the University staff. Seventeen students entered for the course, including nine existing health visitors and fourteen of the fifteen candidates who sat for the examination were successful.

### **Children Act, 1908.**

Under Part I of the Children Act, 1908, every person undertaking for reward the nursing and maintenance of infants, under the age of 7 years, apart from their parents or having no parents are required to give notice in writing to the local authority within

48 hours, and the local authority is required to arrange for the periodical visiting and supervision of such children.

Under the provisions of the Local Government Act, 1929, (section 2), these duties were transferred by the Council to the Health Committee, and since the 1st April, 1930, such children in the care of foster-mothers to whom payment was made by relatives have been kept under the supervision of the maternity and child welfare section by health visitors and school nurses engaged by the Council.

When these duties were transferred from the poor law authority the number of children notified under the Act, and under supervision, was 170. For the period ending 31st December, 1930, notifications have been received of children retained under the provisions of the Act as follows :—

Children received for weekly payment	...	76
„ „ „ „ total sums	...	4

The total number under supervision on December 31st, 1930, was 196.

### Children's Homes.

#### Staff.

Visiting medical officer	...	J. A. L. Roberts, M.B., B.S.
„ „ „	...	E. V. Foss, M.B., Ch B.
„ dental surgeon	...	W. J. Jones, L.D.S.
Superintendent and matron		Mr. & Mrs. W. E. Twaits.

Assistant superintendent, 1; nurse 1; foster mothers and reliefs, 25; storekeeper, 1; gardener, 1; domestic staff, 19.

The Council on the 30th July, 1929, resolved :—

“ that the functions of the Public Assistance Committee, in so far as they relate to the maintenance of poor children apart from their parents, shall be discharged, on behalf of and subject to the general direction and control of the Public Assistance Committee, by the Health Committee of the Council.”

These consist of :

- (1) Boarded-out children—approximately 100.
- (2) Children in cottage and scattered homes—approximately 300.

On the first of April, 1930, the Health Committee, in accordance with the decision of the Council, undertook the responsibility of looking after ‘ poor children apart from their parents ’ which had previously been the sole responsibility of the Guardians. The officers have had nine months wherein to make themselves acquainted with the facts and to gain some experience of the details of administration. Naturally the change-over has meant much more than transferring the duties from one committee to another.

The question of greatest importance is that of general policy and a report has been submitted to a joint committee of the Health and Public Assistance Committees, which is now being considered.

On the 25th November, 1930, with the approval of the Public Assistance Committee, the babies under three years of age were transferred from Eastville Institution to the Downend Homes.

The accommodation in the Children's Homes is as follows :—

1. At The Crescent, Downend :—

Babies' Home. 35-40 children under 3 years.

Toddlers' „ 20 „ 3-5 years.

1 convalescent home ; 1 receiving home (all new admissions are kept here for two weeks) ; 10 homes for school children, 14 in each home ; office and house for matron and superintendent.

2. At Channon's Hill for school children :—

3 houses with accommodation for 85 ; equipped for 54—present number 47 ; office ; stores and house for assistant superintendent ; disused laundry.

3. At the Scattered Homes for school children :—

i. Charlton Road—4 Homes ; 14 boys in each Home.

ii. Beaufort Road, St. George—2 Homes ; accommodation for 14 each—present number 11.

4. At the Service Boys' Home, Pritchard Street :—

Present number 15.

On the 31st December, 1930, the number of children in the Homes was as follows :—

	Over 16.	From 3-16	Under 3	Total
Headquarters Homes ...	—	41	—	41
Cottage Homes ...	4	158	29	191
Scattered Homes ...	1	65	—	66
Service Boys ...	12	3	—	15
	17	267	29	313

### Boarded-out children.

Under the conditions of the Boarding-out Order, 1911, no child may be boarded out unless he is :—

(a) An orphan child ;

(b) A deserted child ;

(c) A child in respect of whom the powers and rights of a parent or parents are in pursuance of section 52 of the Poor Law Act, 1930, vested in a Council.

On the 1st April, 1930, the date upon which the functions in connection with boarding-out matters were transferred to the Health



Committee, the following children were under the supervision of boarding-out committees, with whom agreements under the Boarding out Order, 1911, were in existence :—

Ashbourne	...	...	...	12	children.
Bristol and Clifton	...	..	...	60	„
Bradford-on-Avon	..	...	...	1	„
Clveston	...	...	...	2	„
Stonchouse	...	...	...	2	„
Trowbridge	...	...	...	2	„
Westbury	...	...	...	7	„
Winterbourne	...	...	...	6	„
Other Unions	...	...	...	6	„
				<hr/> 98 <hr/>	

In October, 1930, it was decided to amalgamate the Westbury Boarding-out Committee with the Bristol and Clifton Committee, the name of the latter body to be known in future as the "Bristol Boarding Out Committee." There are 27 members of this committee, of whom 25 act as voluntary visitors to the children boarded-out.

During the period ending 31st December, 1930, 20 children have been boarded-out, chiefly with relatives, the matters being arranged at the request of the Public Assistance Committee. Ten children have obtained situations, and four have been transferred to other boarding-out committees or institutions, leaving a total of 104 children boarded-out at the end of the year.

The Health Committee consider that the system of boarding-out is of great advantage to a child, and they are arranging to carry this principle into effect as far as possible with the children under their care, although it must be remembered that only certain cases are eligible for this purpose.

### Unmarried mothers.

The work in connection with unmarried mothers is carried out by Mrs. Stott, the welfare officer to the Public Assistance Committee and Health Committee. Her work consists of getting in touch with the mother as early in pregnancy as possible by means of ante-natal clinics, health visitors, the Public Assistance Committee, etc.; this is important if the girl is to be helped to realise her responsibility towards her child.

Suitable arrangements are made for the confinement, and for post-natal care and treatment. The officer deals with affiliation, in many cases private settlements are obtained; the advantage of this is that there is no need for the girl to communicate with the man, and often she need not go to Court. After-care in the form of visits or letters is carried out in all cases as long as necessary, that is, for at least two years.

The increase in the work is due chiefly to the fact that there have been more applications for beds at Southmead. There is also a greater willingness on the part of the mothers to be advised and helped.



*Report by Mrs. Stott, welfare officer.*

From 1st April, 1930, to 31st March, 1931, 145 applications from unmarried mothers, or in respect of an illegitimate child, have been received, and of this number

117 sought help in respect of the 1st illegitimate child.

20	„	„	„	„	2nd	„	„
7	„	„	„	„	3rd	„	„
1	„	„	„	„	4th	„	„

The 145 cases, 17 of which have been referred from or to the Public Assistance Committee, have been dealt with as follows :

- 97 confined at Southmead Hospital.
- 14 „ „ mother and baby homes.
- 2 „ „ Bristol Royal Infirmary.
- 15 other assistance given in confinement, or assistance not needed.
- 2 transferred with baby to Eastville from another union.
- 4 applications withdrawn.
- 11 arrangements not completed.

Twenty-seven of the girls were subsequently sent to mother and baby homes.

During the year £1,715 has been collected. Of this sum, £53 11s. 6d. has been paid to the city treasurer in respect of maintenance of babies born at Southmead, or mother and baby homes, for whom affiliation orders or agreements have later been obtained. £750 has been paid to the Public Assistance Committee's collecting officer, being money paid at Court or privately under separation and affiliation orders for people chargeable to the committee. The balance, approximately £912, had been paid to mothers and foster-mothers of illegitimate children.

Total number of visits paid	...	...	...	...	670
Callers interviewed at office	...	...	...	...	1,600
Letters written	...	...	...	...	2,017
Remittances sent	...	...	...	...	1,500
Affiliation orders obtained	...	...	...	...	27
Private settlements obtained	...	...	...	...	24
Cases dismissed at Court	...	...	...	...	1

Other cases dealt with :—

- 2 married women's maintenance orders obtained.
- 3 children under 14 years placed in homes suitable to their special needs.
- 1 girl of 16 placed in a home.

## IV.—SANITARY CIRCUMSTANCES.

### Water supply.

A constant supply of water for the city from the Bristol Water Works Company's sources has been maintained during the year 1930 and is assured for the year 1931.

The number of dwelling-houses connected with the Company's mains is 88,122 ; this figure refers to houses inside and outside the city boundary. Practically the whole of the inhabitants of Bristol are supplied by the Company for domestic purposes. The number of houses supplied for domestic purposes by standpipes is negligible. During the year 1930 the daily supply for domestic purposes averaged 23.21 gallons per head of the population.

The Company's sources of supply consist of :—

Springs in the carboniferous limestone and the conglomerates of the Mendip Hills.

Deep wells in the new red sand stone and marls of the triassic formation at Chelvey.

An impounding reservoir in the Yeo Valley.

To guard against the contamination of the Company's sources of supply extensive drainage and protective works have been constructed at a cost exceeding £200,000. The Company's waters are not liable to have plumbo-solvent action. During the year 1930 the Company continued to carry out drainage and protective works wherever circumstances arose which would be likely to cause contamination of the sources.

A summary of the analyses made during the year is given in the appendix.

### Rivers and streams.

No special action in regard to river pollution was found necessary to be taken during the year.

### Sewerage.

No alteration to the system of sewerage or sewage disposal in the city was made during the year 1930.

The Wellington Hill, Horfield, sewer extension referred to in the last report has been completed. This extension, 767 yards, gives facilities for the soil drainage in the locality. The most important sewer works commenced in 1930 were :—

#### *Avonmouth sewer outfall—extension.*

In consequence of dock development in the vicinity of Broad Pill and filling in of the Pill by the Docks Committee, it was necessary for the outfall sewer at this point to be extended for a distance of 200 yards. The work was commenced in January and completed in June, 1930.

#### *Coronation Road sewer outfall.*

This work, commenced in February, was still in progress on the 31st December, 1930. The sewer, which will be about 267 yards

in length, is being constructed to act as a relief sewer at Ashton Gate, and will discharge into the river Avon at low water near the Ashton Swing Bridge.

*Southmead and Westbury sewer reconstruction.*

Owing to the anticipated development of the Council's large housing scheme at Southmead, it became necessary to reconstruct the above main sewer. This involves the laying of a new main sewer for a length of nearly two miles. The sewer is designed on the "partially separate" system to drain the whole of Southmead area of 1,800 acres, from Westbury-on-Trym to Filton, and provision made for an additional amount of sewerage to be pumped from Filton. The work commenced in May and was still in progress on the 31st December, 1930.

*Bears Bridge sewer, Brislington.*

Commenced in December, 1930, and still in progress.

This is an extension of the Brislington sewer for a distance of 560 yards westward along the new airport road in order to open up for development further portions of the Knowle housing site, and also to deal with the portion of land brought into the city by the extension of boundary under the Bristol Corporation Act, 1930.

**Closet accommodation.**

The sewage of the city is discharged into the tidal portion of the River Avon by means of the water carriage system.

Four types of closets are in use in the city, viz. :—

Pedestal pan and trap with flushing cistern ;

Cottage pan and syphon trap with or without flushing cistern ;

Glazed lining with six inch outlet and syphon without flushing cistern ;

Old brick trunk (few).

Many closets are without flushing appliances. Most of these closets consist of the glazed lining or the cottage pan and syphon trap types, and several are situated outside houses which are also provided with other closets having flushing cisterns. The few existing brick trunk closets are replaced by modern pattern W.C.'s whenever they are discovered.

**Scavenging and refuse disposal.**

Experiments are being made with various mechanical vehicles to replace to some extent horse drawn vehicles for the collection of refuse.

During 1930 four Shelvoke & Drewry petrol-driven motor vehicles and one set of the Eagle engineering plant, consisting of a petrol motor tractor and three containers, were purchased, also two Morris chassis to which special low-loading bodies with sliding covers constructed at our own workshops have been fitted. All these vehicles are an improvement on the old system of horse-drawn vehicles, but they have not been in use long enough to form a definite opinion as to their respective merits.

A further improvement in connection with house refuse has been the compulsory provision of suitable bins under the powers of section 95, Bristol Corporation Act, 1926, which empowers the Corporation to serve notice on property owners to provide proper bins. Up to the 31st December, 1930, four wards of the city were completed, also all the Corporation housing sites and other parts of the city where deemed necessary to deal with at once. During 1930, 7,290 bins were hired from the Corporation making a grand total of 12,700 and as many, or more, bins of a pattern approved by the Corporation have been provided privately.

### SANITARY INSPECTION, etc.

Report by J. A. ROBINSON, Chief Sanitary Inspector.

#### *Staff.*

Chief sanitary inspector ... J. A. Robinson, F.S.I.A.

Superintendent sanitary inspector ... T. J. Crofts, F.S.I.A.

Meat inspectors, 3, milk and dairies inspectors, 2; food and drugs inspectors, 2; workshop inspector, 1; lodging house inspector, 1; district sanitary inspectors, 12; inspectors' labourers, 4; disinfecting staff, 9; ratcatchers, 4; clerks, 4.

No. of complaints received and attended to ... 2,238

Formal notices and orders served :—

For abatement of nuisances, etc. ... 187 notices.

For repair of private party drains ... 24 drains, taking the drainage of 142 properties.

For paving of private passages ... 7 passages used by occupiers of 211 properties.

Prosecutions in respect of nuisances 13

*Summary of work effected by district sanitary inspectors and special inspectors.*

#### SPECIAL VISITS—

Enquiries regarding smallpox, etc. contacts ... 42

„ „ gas poisoning ... 6

Inspection of nursing homes ... 5



Nature of work done.	District.	Houses let-in lodgings.	Common lodging houses.	Factories and work- shops
No. of visits for all purposes ... ..	32,212	2,105	933	2,968
„ house to house inspections ... ..	203	—	—	—
„ premises inspected on complaint ...	2,449	120	2	27
„ informal notices served ... ..	1,319	103	2	126
„ informal notices complied with ...	1,456	95	1	130
„ drains tested with smoke ... ..	568	9	—	7
„ drains tested with chemicals, etc....	556	14	—	2
„ chimneys extended or altered ...	12	—	—	1
„ insanitary W.C.'s. converted ... ..	401	12	—	—
No. of drains entirely relaid ... ..	169	7	—	2
„ drains partially relaid ... ..	582	13	—	9
„ scullery sinks fixed ... ..	453	8	—	—
„ sinks, drains, etc., trapped ... ..	918	4	—	5
„ W.C.'s fitted with new pans and traps ... ..	547	23	—	33
„ W.C.'s repaired and cleansed ... ..	269	3	—	32
„ W.C.'s provided with flushing apparatus ... ..	518	24	4	16
„ additional W.C.'s provided ... ..	47	4	—	13
„ roofs repaired ... ..	916	67	9	5
„ eaves, gutters and rain water spouting repaired, etc. ... ..	771	22	2	2
„ yards, passages, etc. paved or repaired ... ..	696	47	5	2
„ rooms, passages, etc. cleansed, re- papered or distempered ... ..	778	426	545	182
„ damp houses remedied ... ..	372	9	—	1
„ premises supplied with Company's water ... ..	20	—	—	—
„ cases of overcrowding in dwelling- houses abated ... ..	11	10	—	—
„ dustbins provided ... ..	64	—	—	—
„ offensive accumulations removed ...	164	6	2	2
„ cases of animals improperly kept ...	7	1	—	—
„ cesspools abolished ... ..	5	—	—	—
„ polluted wells closed ... ..	5	—	—	—
„ manure pits provided ... ..	7	—	—	—
„ other nuisances abated or defects remedied ... ..	1,795	118	3	7
„ windows provided or repaired ... ..	—	33	—	—
„ washing accommodation provided ...	—	1	—	—
„ food storage and cooking accommo- dation provided ... ..	—	16	—	—
„ common staircases repaired ... ..	—	2	—	—



Inspections, etc. in connection with :	No. of inspec- tions made.	No. of nuisances, contraventions of byelaws, defects, etc.	
		Found.	Remedied.
Basement rooms ... ..	63	7	4
Bathroom geyser ventilation ... ..	177	77	73
Dirty premises ... ..	42	16	14
Entertainment places ... ..	201	11	11
Fried fish shops ... ..	593	51	56
Offensive trades (other than fried fish shops)	361	9	7
Rag and bone dealers ... ..	16	2	1
Removal of offensive matter through the streets ... ..	16	—	—
Tents, vans and sheds ... ..	84	5	3
<i>Places where food, etc. is prepared, etc.</i>			
Bakehouses ... ..	541	112	91
Cooked meat shops, etc. ... ..	70	7	7
Keeping of animals ... ..	19	4	3
Ice cream manufacturers and vendors ...	429	32	26
Restaurants ... ..	153	16	11
Street traders (excluding vendors of ice cream) ... ..	45	2	2
Other food stores ... ..	10	7	7
<i>Slaughterhouses and meat, etc., premises.</i>			
No. of visits to slaughterhouses ... ..			6,407
„ „ „ wholesale and retail meat markets ... ..			1,430
„ „ „ meat and fish shops ... ..			3,685
„ „ „ cattle markets and railway sidings ... ..			64
„ „ „ fish curing premises ... ..			18
„ „ „ sausage, etc., making premises ... ..			56
No. of slaughterhouses cleansed ... ..			64
„ slaughterhouses rebuilt, repaired or altered ... ..			1
„ sanitary defects, etc. remedied in slaughterhouses ...			11
<i>Dairies, milkshops and cowsheds.</i>		Dairies and milkshops.	Cowsheds.
No. of premises registered at end of year		1,008	48
„ visits during the year ... ..		5,203	292
No. of premises cleansed ... ..		121	45
„ premises built, repaired or altered...		16	—
„ drains tested ... ..		2	—
„ drains amended ... ..		11	—
„ insanitary W.C's converted ... ..		1	—
„ W.C's fitted with new pans and traps		5	—
„ W.C's fitted with flushing appliances		4	—
„ other defects or insanitary conditions remedied ... ..		48	1

## **The Milk and Dairies Order, 1926,**

Three cases of contraventions of the above-mentioned order were reported to the Health Committee during the year.

In two instances this resulted in the sale of milk being discontinued on the premises which were being used for dairy purposes : and in the other case the retailer appealed to the magistrate against the decision of the Health Committee to remove his name from the register of dairymen, and the matter is in abeyance pending his finding suitable premises.

## **Smoke abatement.**

The nuisance from smoke is practically confined to emissions from a few large chimneys of manufacturing premises which are situated near the centre of the city. Observations are taken at intervals, and when an undue emission is noted the firm concerned is immediately informed and advice is given to the employés responsible. 143 observations of smoke were taken during the year, and firms were approached in 18 instances.

A byelaw made under section 2 of the Public Health (Smoke Abatement) Act, 1926, prescribing that the emission of black smoke for a period of three minutes in the aggregate within any continuous period of thirty minutes from any one chimney in a building other than a private dwelling-house shall until the contrary is proved be presumed to be a nuisance (except in regard to chimneys of brick kilns which are fed with fuel otherwise than from above) was allowed by the Minister of Health on the 21st February, 1930.

## **Premises and occupations controlled by byelaws or regulations.**

### *Houses-let-in-lodgings.*

An inspector specially appointed for the work supervises the common lodging houses and houses-let-in-lodgings.

Byelaws are in force in the city which incorporate the provisions of sections 6 and 7 of the Housing Act, 1925. At the end of 1930, 196 properties had been registered under these revised byelaws.

### *Common lodging houses.*

There are 34 common lodging houses in the city, including one belonging to the Corporation, but excluding 6 seamen's lodging houses.

Five of the common lodging houses for men are separately registered, although they adjoin and constitute additions to other common lodging houses, and are controlled by the keepers of the adjoining premises. Four others, which accommodate females, and in one case also married couples, adjoin common lodging houses for men, and are also controlled by the keepers of the adjoining houses.

There are 1,538 beds provided in these common lodging houses, to accommodate 1,409 single males (including 123 beds provided in separate cubicles at the municipal lodging house), 118 single females, and 11 married couples. This accommodation appears to be ample for the present requirements of the city. The municipal lodging house is well patronised ; but at a recent inspection of the other lodging houses in the city it was found that only 60% of the available accommodation was in use.

## MUNICIPAL LODGING HOUSE.

*Staff.*

Superintendent and matron, 2; porters, 3; domestic, 5; bedmakers 2; scrubbers (part-time), 1; sewing woman (part-time), 1.

Under powers derived from Part iii of the Housing of the Working Classes Act, 1890, the Council decided in 1899 to purchase a site in the densely populated district of St. Jude for the erection of a lodging house. The building which is four storeys high, exclusive of basement, was opened on April 20th, 1905, at a total cost of £9,917 for site, building and furnishing. The building provides the following accommodation: 123 cubicles for men only, dining room, reading room, kitchen, laundry, drying room, 2 single bathrooms, cloakroom containing 20 wash-basins, 5 lavatories, and 1 room containing 5 knee baths.

Facilities are also available for the washing of lodgers' clothing.

The house is well managed and fills a definite need in the city. Its popularity may be judged by the occupations. Last year 40,721 occupations were recorded—a nightly average of 111 lodgers and the house was full on 33 occasions. The charge for each lodger per night is one shilling; baths 3d., and parcel tickets 2d. extra.

The house may be regarded as self-supporting, the cost of running the institution showing a surplus of £384 11s. 3½d. over the past seven years.

*Tents, vans and sheds.*

Byelaws with respect to tents, vans, sheds and similar structures used for human habitation, are in force in the city.

At the present time there are 76 such caravans, etc., in four districts of the city. Of these, 49 are permanent structures, and 27 (used by showmen, etc.) are temporarily stationed in Bristol. These permanent vans, etc. are occupied by 74 adults and 31 children; and approximately 56 adults and 36 children occupy the temporary structures.

*Offensive trades.*

Byelaws are in force which govern the undermentioned offensive trades:—

Animal charcoal manufacturer, blood-boiler, blood-drier, bone-boiler, fat-melter or fat-extractor, fellmonger, fish-curer (not carried on by a fishmonger as subsidiary to his trade or business as a fishmonger), fish-fryer, fish-oil manufacturer, glue-maker, gut-scraper, manufacturer of manure from fish, fish offal, blood or other putrescible animal matter, manufacturer of poultry meals comprising fish refuse or other refuse of animal origin, rag-and-bone dealer, soap-boiler, tallow-melter, tanner and tripe-boiler.

In addition to fish-frying businesses, there are 47 premises in the city wherein offensive trades are carried on. 361 inspections of these premises were made during the year and 593 inspections of fish-frying businesses.

*Annual consents to establish or continue fish-frying.*

No. of applications.			Annual consents		No. of applications in abeyance at end of year.	No. of renewals granted to December 1930
In abeyance from previous year.	Received during the year.	Withdrawn	Granted	Not granted		
2	34	12	8	14	2	24

*Underground sleeping rooms.*

The Council has approved regulations for securing the proper ventilation and lighting of rooms in respect of which section 18 (1) of the Housing Act, 1925, applies, and the protection thereof against dampness, effluvia or exhalation.

**Ventilation of bathrooms and bathroom geysers.**

Byelaws with regard to this matter are incorporated in a series of building byelaws.

**Prevention of nuisances arising from snow, or keeping of animals on premises.**

Byelaws with regard to these matters received the approval of the Minister of Health on the 14th November, 1929 ; one statutory notice with regard to the keeping of animals was served during the year.

**Places of entertainment.**

Periodical inspections of cinemas, theatres and other places of entertainment in the city are made by the district sanitary inspectors. Special attention is given to the sanitary accommodation provided, and to the ventilation and lighting of these premises.

**Workshops.**

The number of workshops and workplaces on the register at the end of 1930 was 1,709. Fifty-six notices relating to sanitary defects in factories, workshops, etc. were received during the year from H.M. Inspector of Factories.

*Homework—lists of outworkers received during 1930.*

	No. of outworkers	
	February	August
Boot and shoe making ... ..	10	29
Paper bag making ... ..	5	5
Making of wearing apparel ... ..	125	131
Particulars received from other authorities	2	1
Total ...	142	166



The lists of outworkers and their addresses are supplied to the town clerk by the various employers. These premises are visited by the workshops' inspector during the course of his other duties.

### Factory and Workshop Act, 1901.

#### 1.—*Inspection of factories, workshops and workplaces.*

Premises. (1)	Number of		
	Inspections (2)	Written notices (3)	Occupiers prosecuted (4)
Factories (Including factory laundries) ...	446	45	—
Workshops (Including workshop laundries)...	1,902	2	—
Workplaces (Other than outworkers premises)	34	—	—
Total ...	2,382	47	—

#### 2.—*Defects found in factories, workshops and workplaces.*

Particulars  (1)	Number of defects			Number of offences in respect to which prosecutions were instituted (5)
	Found (2)	Remedied (3)	Referred to H.M. Inspector (4)	
<i>Nuisances under the Public Health Acts :*</i>				
Want of cleanliness ... ..	156	154	2	—
Want of ventilation ... ..	4	3	—	—
Overcrowding ... ..	3	—	—	—
Want of drainage of floors ... ..	1	1	—	—
Other nuisances ... ..	13	10	—	—
Sanitary accommodation { insufficient ... ..	26	23	—	—
{ unsuitable or defective ... ..	49	31	—	—
{ not separate for sexes ... ..	2	1	—	—
<i>Offences under the Factory and Workshop Acts :</i>				
Illegal occupation of underground bakehouses (s.101) ... ..	—	—	—	—
Other offences ... ..	—	—	—	—
(Excluding offences relating to out-work and offences under the sections mentioned in the schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921) ... ..				
Total ...	254	223	2	—

\* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.



**Cemeteries.**

Name.	Provided by	Acreage
Greenbank ... ..	Corporation ... ..	30
Canford ... ..	do. ... ..	11
Avonview ... ..	do. ... ..	24½
Shirehampton ... ..	do. ... ..	6
Arnos Vale (Cemetery and Crematorium) ... ..	Bristol General Cemetery Co.	45
Redcliffe Cemetery ... ..	St. Mary Redcliff Church ...	4
Roman Catholic ... ..	Roman Catholic Diocese ...	2
Ridgeway Park ... ..	Ridgeway Park Cemetery ...	8

The existing cemeteries with land held in reserve, will, it is anticipated, provide adequately for the needs of the city for the next 20 years. The crematorium at Arnos Vale cemetery was opened for use on 10th February, 1928, and the first cremation took place therein on the 2nd March. The total number of cremations in 1930 was 143.

**Schools.**

The medical officer of health is also the school medical officer and issues a separate report which deals with the health of the scholars and the sanitation of schools.

**Health education.**

Apart from special lectures to mothers' schools, many public lectures on health questions were given during the year by members of the public health staff. It is the rule of the department that every endeavour is made to accede to all requests to give public lectures and demonstrations on problems dealing with public health and preventive medicine.

**Rag Flock Acts, 1911 and 1918.**

Rag flock is used in a few premises in the city. Two samples were taken during the year and when analysed by the public analyst were found to conform to the standard of cleanliness laid down in the regulations.

## V.—HOUSING.

Report by A. G. MORISON, M.A., M.D., D.P.H.,  
Deputy Medical Officer of Health.

### Staff

Chief housing inspector ... A. W. Griffiths, Cert. B.C. etc., M.S.I.A.  
Housing inspectors, 5; clerks, 3.

### Inhabited houses.

The following table indicates the number of dwellings inhabited, void and erected from 1919 to 1930 :

Year	Inhabited	Void (estimated)	Erected
1919	72,100	530	72
1920	72,777	220	127
1921	72,864	220	749
1922	74,700	281	334
1923	74,082	221	431
1924	75,015	380	1,071
1925	77,209	416	1,975
1926	79,195	640	2,276
1927	80,975	802	2,295
1928	83,044	678	1,671
1929	86,125	1,091	1,759
1930	87,618	1,229	1,931

### Housing.

A study of the outstanding closing and demolition orders in the city is illuminating. On the 27th October, 1930, the position was in accordance with the following table :—

Orders outstanding	Premises		Totals
	Void	Occupied	
Closing ... ..	112	209	321
Demolition ... ..	159	127	286
Totals ... ..	271	336	607

This table reveals that of the closing orders still outstanding, no less than 65.1 per cent were still occupied and of houses subject to demolition orders 44.4 per cent remained occupied.

One may consider these figures further. Twelve months is a liberal enough period to allow for a condemned house either to be made habitable or to be demolished. The next table records standing houses subject to orders of over one year's duration.

Orders outstanding more than 1 year.	Premises		Total
	Void	Occupied	
Closing orders ... ..	60	140	200
Demolition orders ... ..	53	94	147
	113	234	347

These figures mean that the percentage of houses subject to long standing closing orders, which remain occupied, is 70, and that the corresponding percentage as regards long standing demolition orders is 63.9.

The number of families provided during the year ending March 31st, 1931, with accommodation by the Corporation because of slum clearance schemes or because of their houses having become subject to closing or demolition orders, is reported to be 106. In all, 1,365 families were re-housed by the Corporation during this period. As previously stated, the number of condemned houses still occupied in October, 1930, was no less than 336.

These facts must be accounted for by the difficulties experienced by families in obtaining alternative accommodation. No doubt, this is largely due to the economic problem which faces families in insanitary dwellings of how to meet the rents of houses which conform to modern requirements. It seems, therefore, that this is the problem which must be solved if the city is ever to be rid of its slums and its unfit houses. I am aware that this problem is receiving the anxious thought of the Housing Committee at the moment.

Bristol is an old city and its housing problem is largely the same as that of other old cities. There are hundreds of houses worn out and defective beyond the stage of any patching—houses for which the only possible remedy has become demolition. But panic action will not solve Bristol's problem. Appreciation is necessary of the adage that half a loaf is better than no bread for the family requiring a shelter. Wholesale condemnation and demolition, therefore, with nothing to offer, will never solve the housing problem. It would be futile for the Corporation to continue to condemn beyond the city's capacity to re-house. It must be the endeavour of this department to make its recommendations so that new accommodation to be provided shall be used to the best purpose for the city.

The following is the provisional programme for five years submitted to the Council on the 9th December, 1930.

	Estimated number of houses to be provided during year ending 31st March.					
	1932	1933	1934	1935	1936	Total
To meet shortage ... ..	1,000	1,000	1,000	1,000	1,000	5,000
Dings area improvement ...	152	—	—	—	—	152
Construction and widening of streets ... ..	190	75	40	40	—	345
Clearance areas, improvement areas, individual unfit houses	158	425	460	460	500	2,003
Total houses to be provided	1,500	1,500	1,500	1,500	1,500	7,500

There are groups of houses which, although not deemed to be entirely satisfactory, may be allowed to remain for some years

longer. It is proposed to postpone action in such cases except as regards urgent emergencies. I anticipate more early action principally in the Bedminster, St. Augustine's, St. James', St. Paul's and part of S. Philip's areas.

A summary of action taken as regards unfit houses under the powers granted by the Housing Acts may be given in the form of the following table :—

1st January, 1927, to 31st March, 1931.					
Action taken.	Number of houses.				
	1927	1928	1929	1930	Jan./Mar. 1931
Informal ... ..	36	64	52	75	42
After closing orders ... ..	30	25	20	26	16
After demolition orders ... ..	14	10	6	17	2
After formal notices ... ..	10	25	38	51	9
By Corporation in default of owners after service of formal notices ... ..	6	9	15	9	1
Totals ... ..	96	133	131	178	70

Action taken.	1927	1928	1929	1930	Jan./Mar. 1931
Demolished ... ..	82	90	100	112	34

That the Housing Committee has still a task of some magnitude is revealed by the fact that the numbers of houses requiring action, but remaining outstanding, for the last five years are :—

1926	1927	1928	1929	1930
2,132	2,176	2,270	2,500	2,553

This means, that during the year under review arrears were not overtaken ; indeed 53 houses were added to the number untackled.

### Housing Inspection.

Report by A. W. GRIFFITHS, Chief Housing Inspector.

#### *Prosecutions and appeals.*

Police court. Infringement of sec. 12, Housing Act, 1925 :—One prosecution, owner and occupier fined ; occupier ordered to vacate forthwith.

One application for ejectment order—house subject to demolition order. Occupier ordered to vacate within 28 days. Premises ultimately demolished.

## Appeals.

Against closing orders :—

One house—owner withdrew appeal. Two houses—enquiry held—appeal dismissed—appellant ordered to pay costs, £9 3s. 11d. Three houses—enquiry held—appeal dismissed—appellant ordered to pay £9 2s. 11d. costs.

Against demolition orders :—

One house—decision deferred in 1929—finally appeal dismissed. One house—owner withdrew appeal. One house—enquiry held—appeal dismissed—appellant ordered to pay £5 0s. 11d. costs. Six houses—enquiry pending. Two houses—ditto.

*Houses demolished.*

No. of houses demolished during 1930 :—

Voluntary	...	...	...	...	10
After closing orders	...	...	...	...	45
After demolition orders	...	...	...	...	57
				—	112

*New houses.*

Number of new houses erected during the year :—

(a) Total (including numbers given separately under (b)).

(i) By the local authority	...	...	...	1,069
(ii) By other local authorities	...	...	...	nil
(iii) By other bodies and persons	...	...	...	862

(b) With State assistance under the Housing Acts :—

(i) By the local authority :—

(a) For the purpose of Part II of the Act of 1925	30
(b) For the purpose of Part III of the Act of 1925	...
(c) For other purposes	...

(ii) By other bodies or persons ... 1,026

*Inspection of Dwelling houses.*

- (1) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts) and the number of inspections made ... 2,773
- (2) Number of dwelling houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925, and the number of inspections made ... 324
- (3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation ... 324
- (4) Number of dwelling houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation ... nil

*Remedy of defects without service of formal notices.*

Number of defective dwelling houses rendered fit in consequence of informal action by the local authority or their officers ... 1,460



*Action under statutory powers.*

## A. Proceedings under section 3 of the Housing Act 1925, and section 17 of the Housing Act, 1930 :—

(1) Number of dwelling houses in respect of which notices were served requiring repairs ... ..	73
(2) Number of dwelling houses which were rendered fit after service of formal notices :—	
(a) By owners ... ..	51
(b) by local authority in default of owners ...	9
(3) Number of dwelling houses in respect of which closing orders became operative in pursuance of declarations by owners of intention to close ... ..	2

## B. Proceedings under the Public Health Acts :—

(1) No. of dwelling houses in respect of which written informal notices were served requiring defects to be remedied	...	...	...	...	...	...	1,385
(2) No. of dwelling houses in which defects were remedied after service of formal notices :—							
						Private party drains	
(a) By owners	...	...	91	9	}		218
(b) By local authority in default of owners	...	...	15	103*			
			<hr/> 106	<hr/> 112			

\* In some of these cases the local authority re-laid the combined drain, and private contractors re-laid the branch drains, etc.

## C. Proceedings under sections 11, 14 and 15 of the Housing Act, 1925, and section 19 of the Housing Act, 1930 :—

(1) Number of representations made with a view to the making of closing orders ... ..	165
(2) Number of dwelling-houses in respect of which closing orders were made... ..	123
(3) Number of dwelling houses in respect of which closing orders were determined, the dwelling houses having been rendered fit ... ..	26
(4) Number of dwelling houses in respect of which demolition orders were made ... ..	152
(5) Number of dwelling houses demolished in pursuance of demolition orders ... ..	57

*Number of houses owned by the local authority.*

Distinguishing those built in the last two years and held under :

(1) Part iii of the Housing Act, 1925 ... ..	1,632
(2) Part ii of the Housing Act, 1925 ... ..	nil
(3) Other powers ... ..	nil

Total number of houses owned (including above sub-heads)... 7,089

## VI.—INSPECTION AND SUPERVISION OF FOOD.

Report by J. A. ROBINSON, F.S.I.A., Chief Sanitary Inspector.

### (a) Milk supply.

About 18,000 gallons of milk are consumed daily in the city, which with an estimated population of 391,300 gives .37 of a pint per head per day. From the last available figures about 8% or 1,440 gallons only is produced within the city; 23% or 4,140 gallons within a 3 mile radius of the boundary and the remaining 69% or 12,420 gallons beyond that distance. The bulk of the supply is brought in by motor lorries, and only a small proportion by rail.

About 7,000 gallons or 38.8% of the supply is cleansed and pasteurised before delivery to the consumer, and the remainder is delivered direct to the dairymen who retails it without any treatment beyond being strained and cooled. The greater portion of the supply is delivered as loose milk. The amount of bottled milk retailed daily is 4,219 gallons—23.4%—in addition to which there are 11,000 pints of bottled homogenised milk or 1,375 gallons—7.6%—making a total percentage of milk retailed in bottles as 31% of the whole.

Amount consumed daily :—

Certified milk	...	...	13 gallons
Grade A T.T.	...	...	224½ „
Grade A	...	...	275 „
Pasteurised	...	...	7,210 „
Homogenised	...	...	1,375 „

It is to be regretted that certified milk is not in greater demand. The supply has dropped 50% since 1922 and one must assume that this is because the price is prohibitive to the general consumer.

During the year 1930, 178 samples of milk were taken, an increase of 20 compared with the preceding year.

						Samples
For tuberculosis examination	...	...	...	...	...	50
Repeats „ „	...	...	...	...	...	2
Certified milk	...	...	...	...	...	18
Grade A (tuberculin tested)	...	...	...	...	...	28
Grade A	...	...	...	...	...	53
Pasteurised	...	...	...	...	...	24
Category and special	...	...	...	...	...	3

The 50 samples of milk examined for tuberculosis were taken from :—

Producers.					No. of specimens.	Tubercle bacilli present in.
City	...	...	...	...	7	—
Somersetshire	...	...	...	...	17	—
Gloucestershire	...	...	...	...	26	6

*Milk examined for tubercle bacilli.*

Tubercle bacilli were found in six or 12% of the 50 samples taken. In each case the county authority concerned was notified and action taken.

In 25 of the 50 samples taken for examination for tubercle bacilli, the preliminary reports indicated an excessive amount either of dirt, pus, organisms, etc., in the milk, and these reports were forwarded to the county authorities concerned.

*Certified milk.*

In accordance with the instruction of the Ministry of Health, 18 samples of certified milk were taken and submitted for examination to the city analyst. Four samples failed to comply with the requirements of the Milk (Special Designations) Order, 1923. Two samples had a bacterial count in excess of the maximum laid down in the order, with *B. Coli* present in 1/10 c.c. and two other samples had *B. Coli* present in 1/10 c.c.

*Grade A (tuberculin tested) milk.*

Of the 28 samples of grade A (tuberculin tested) milk, nine showed the presence of *B. Coli* in 1/100 c.c. which is in excess of the requirements of the order.

*Grade A milk.*

Of the 53 samples of grade A milk, two only had counts in excess of that required to comply with the standard, viz., 300,000 and 285,000, the lowest bacterial count was 390 per c.c. Eight samples failed to comply with the order as *B. Coli* were found in 1/100 c.c.

*Pasteurised milk.*

Twenty-four samples of pasteurised milk were taken. One sample gave a bacterial count of over 100,000 per c.c. and consequently did not comply with the requirements of the order. Eight samples gave no *B. Coli* in 1/10 c.c. No standard is laid down as regards *B. Coli* in this grade of milk.

*Other milks.*

The city analyst classifies samples of other milks so that :—

Category 1—should satisfy the tests as applied to “certified” milk.

Category 2—should comply with grade A requirements.

Category 3—those samples which fall below category 2.

The three samples submitted were placed by the city analyst in category 3.

*Licences for graded milks.*

The following licences were granted for the production and sale of graded milks in the city during the year 1930.

Licence.	No. of licences.
For the sale of certified milk ... ..	7
Bottling and sale of grade A (tuberculin tested)	3
To sell grade A (tuberculin tested) ... ..	6
To produce grade A milk ... ..	1
To bottle grade A milk ... ..	1
To sell grade A milk ... ..	4
Supplementary licences to sell graded milks from premises outside the city ... ..	5
To produce pasteurised milk ... ..	4
To sell pasteurised milk ... ..	2
Total ...	33

*Pasteurising plants.*

The pasteurising plants used by the four firms that hold licences for the production of pasteurised milk are of the following size and make :—

Firm	Positive holder.	Capacity per hour gallons.
A	Enock's 8 drum	600
B	Silkeborg	350
C	Tarbet	350
D	The Astra	220

*Registration.*

The numbers of registrations are :—

Cowkeepers	...	...	...	45
Dairymen	...	...	...	355
Milkshops	...	...	...	578

In addition to which there are 109 dairymen retailing milk within the city from outside districts, making a total of 1,087.

The number of cowkeepers has decreased by 19 since 1922 due to the fact that building operations are now extending towards the outskirts of the city and farms are being replaced by housing sites.

The cowsheds are kept in a good condition generally, and at present work is in progress in the reconstruction of two cowsheds, and improvements of a similar nature is contemplated in another. It has not been found necessary to serve notices under the Milk and Dairies Order as there is a general desire on the part of owners and occupiers to comply with the requirements. As a rule, the Company's water is available, but there are a few farms on the extreme boundary where the supply is obtained from collected rain water, wells and rhines.



The 355 dairies in the city require constant attention. We are gradually proceeding to ensure that every dairy is provided with a separate room for dairy purposes. In this I can report substantial progress, but the problem of the 578 registered small milkshops gives rise to much concern. I refer to the familiar open milk bowl on the counter, near which may be placed all manner of goods, including paraffin, firewood and vegetables, etc., and the milk also becomes contaminated by dust blown in from the street or disturbed by the customers walking in the shop.

One method which has proved successful in a large number of cases is to insist on the small general shop retailer only dealing in bottled milk, and as homogenised milk will keep for some time, a stock can be obtained beyond immediate requirements. Many of these premises are now registered on the understanding that only unopened bottled milk is to be sold.

### **(b) Meat and other foods.**

#### *Public Health (Meat) Regulations, 1924.*

Unfortunately, Bristol does not possess a public abattoir and the lack of this essential adjunct to a well organised public health service renders the carrying out of an efficient system of meat inspection a most difficult and arduous problem.

The Health Committee is fully alive to the urgency of this provision and has obtained the sanction of the Council to submit a scheme for the erection of suitable buildings although the suggested estimated cost is limited to a very modest sum.

In an old city such as Bristol the selection of a suitable site having the necessary approach to a railway siding, is beset with difficulties. The committee entrusted with the duty has examined all likely places and at present is considering a position which possesses many advantages and which I trust will meet the necessary requirements to enable Bristol to fall into line with other cities in this direction.

It must not be inferred that the question of a public abattoir has become insistent during recent years. Even so long ago as 1875 the need was evidently anticipated by our then city fathers, for prior to the passing of the Public Health Act 1875, the Council made it a condition on granting licences for new slaughterhouses that in the event of the Corporation building a public abattoir, such licences would be given up and the premises cease to be used as slaughterhouses.

In the urban and rural districts surrounding the city a number of wholesale butchers have gradually become established, from whom considerably more than 50% of the fresh meat consumed in the city is obtained. It will be obvious that in these widely scattered areas it is impossible for meat inspection to attain the same high standard as within the city, as most of the inspectors are surveyors also and cannot reasonably be expected, therefore, to devote sufficient time to meat inspection. In consequence an undue responsibility is thrust upon the city inspectors.



To meet this difficulty the Corporation obtained power through the Bristol Corporation Act, 1926, to insist upon all butchers bringing freshly killed meat into the city from outside districts to submit the meat for inspection by the city inspectors, and the committee is now drafting a series of relevant byelaws.

In addition, the city inspectors have power to visit slaughterhouses within a radius of ten miles from the Council House, and to examine meat in course of delivery, which if found diseased or unsound, may be seized and dealt with as if exposed for sale.

By arrangement with the chief constable, officers under his control co-operate with health department officials in regard to certain sections of the meat regulations and other matters, and their help has proved most useful and effective.

*Meat prosecutions during 1930.*

Reason.	No. of prosecutions.	Result.
Exposing unsound meat for sale ... .. (Sec. 117, P.H.A., 1875)	1	Two persons each fined 50/-
Failing to give notice of the slaughter of animals ... (P.H. (Meat) Regulations, Part II, Sec. 8).	1	Fined 40/-

(In addition, five orders were obtained for the destruction of unsound meat ; and no further action was taken).

*Meat, etc., found diseased, unsound or unfit for human food during the year 1930 :—*

During the year the inspectors caused the undermentioned amounts of meat, etc., to be destroyed in the city :—

	tons.	cwts.	qrs.	lbs.
From slaughter-houses and shops	29	13	1	3
From cold and foreign meat stores	5	18	—	18
Total meat... ..	35	11	1	21
Fish and shellfish ... ..	38	2	—	11
Fruit ... ..	—	—	1	18
Gammon ... ..	—	—	—	25
Oats ... ..	51	3	—	7
Poultry ... ..	—	—	1	23
Vegetables and salads ...	6	7	1	4
Tinned goods ... ..	—	12	—	2
Total ...	131	16	3	27

Entire carcasses were destroyed during the year for the under-mentioned reasons :—

	Number of animals.	Totals.
<b>BEASTS :</b>		
Dropsical ... ..	2	—
Immature (calves) ... ..	3	—
Inflammation ... ..	1	—
Joint-ill (calf) ... ..	1	—
Moribund ... ..	2	—
Sapraemia (calf) ... ..	1	—
Septicaemia ... ..	1	—
Tuberculosis ... ..	39	—
Unwholesome (calf) ... ..	1	51
<b>SHEEP AND LAMBS.</b>		
Brine stained (lambs) ... ..	2	—
Died in pens ... ..	2	—
Dropsical ... ..	2	—
Emaciated ... ..	5	—
Jaundice ... ..	1	—
Pneumonia ... ..	1	—
Unwholesome ... ..	1	14
<b>PIGS.</b>		
Acute yellow atrophy ... ..	1	—
Bruised ... ..	1	—
Dropsical and emaciated ... ..	1	—
Inflammation ... ..	1	—
Moribund ... ..	1	—
Peritonitis ... ..	1	—
Pleurisy ... ..	1	—
Pneumonia ... ..	1	—
Pyæmia ... ..	1	—
Swine erysipelas ... ..	9	—
Swine fever ... ..	9	—
Tuberculosis ... ..	19	46
<b>PIGS INSPECTED.</b>		
English ... ..	23,626	—
New Zealand ... ..	3,799	—
American ... ..	406	—
Danish ... ..	184	28,015

### *Slaughterhouses.*

Byelaws for the control of slaughter-houses in the city received the approval of the Minister of Health on 24th July, 1925. These byelaws provide for the use of mechanical instruments for the slaughter of the larger animals.

Slaughterhouses, etc. in Bristol.	In December, 1930.
Registered or permanently licensed ... ..	44
Annually licensed ... ..	31*
Knackers' yards (annually licensed) ... ..	2
Foreign animal slaughterhouses belonging to the Bristol Docks Committee ... ..	1

\* (Includes 3 additions to registered premises).

The number is gradually decreasing and in the last 20 years has fallen from 101 to 72.

Speaking generally, the sanitary condition of private slaughterhouses is good, but very few can be considered as really satisfactory.

Most of them suffer by reason of their position, as on account of building operations, premises which were originally practically isolated are now situated in most congested and thickly populated districts; the close confined spaces they occupy retard or prevent adequate ventilation, limit the accommodation for killing and hanging, and renders their improvement an almost impossible proposition.

### *Humane slaughtering.*

In 1925 the Council adopted a new series of byelaws to regulate slaughterhouses which include a modified form of clause 9 (b) of the model byelaws making the compulsory use of a mechanical instrument for stunning applicable to cattle and calves only. The Council agreed to the omission of its use on pigs as a very strong case was made of the risk of blood splashing making the carcasses unsuitable to be cured for bacon, and as Bristol is a large centre for bacon curing it was felt that this might interfere with an established industry.

The occupiers of a number of slaughterhouses, however, have voluntarily adopted the instrument for pig slaughtering in deference to the neighbourhood, so as to obviate or minimise the nuisance of noise from squealing.

### *Meat regulations.*

Bristol Butchers have responded satisfactorily to the request for compliance with the regulations, and prosecutions for infringements have been few and far between. There is no meat hung outside the shop fronts and although we have not insisted on glass windows, we have been able to rely on the good sense of the meat salesman to see that when weather conditions are unfavourable, the meat exposed for sale is adequately protected against dust contamination.

Notifications of slaughter are given regularly and occupiers of slaughterhouses appear to be eager to avail themselves of the meat inspector's advice when carcasses have been found to be diseased, and they have agreeably concurred with the inspector's decision regarding condemnation. In fact, our relations with the Bristol master butchers always have been of the happiest and they have readily given us every assistance.

### *Ice cream.*

Closely allied to the question of a pure milk supply is the proper control and supervision of premises wherein ice cream is prepared, and the Health Committee quite rightly lays stress upon these duties being rigidly administered. Under the Bristol Corporation Act 1926 all premises where ice cream is manufactured, etc., must be registered. This is of course a seasonal trade which commences about Easter and the procedure which has been adopted is to register premises annually from April 1st, which gives us continuous control.

Registration affords an opportunity for inspection and we are thus enabled to set up a certain standard of requirements with respect to general cleanliness of premises and utensils. Where possible, we insist that the ice cream shall be prepared and the necessary utensils stored in a place quite apart from any room in which other work or household duties are carried out. Before obtaining the power of registration, we were unaware of a great many of the places where ice cream was made or the conditions then existing. In many instances we found that the retailers boiled the constituents on the gas stove in the kitchen or scullery where the preparation was afterwards mixed, prior to being deposited for sale in the general shop, amidst all kinds of dusty articles. These places are now gradually disappearing and a threat to withhold registration is generally sufficient to bring them in line with our requirements. A satisfactory standard of cleanliness was maintained in the 213 premises registered last year; and the risk of contamination was reduced to a minimum.

### *Bakehouses.*

There are 235 bakehouses in the city. These premises are visited regularly by the district sanitary inspector, and it is seldom that one has cause to complain with regard to cleanliness. An occasional lapse on the part of the occupier to keep the premises properly limewashed is promptly attended to on a verbal intimation being given.

It would be an advantage to wrap all bread in paper before delivery, as it is not an uncommon sight to see loaves left uncovered on window sills and even on doorsteps quite close to a dusty footpath. There are many other ways of dust contamination; for instance, horse vans are used in the city for bread delivery, and the driver after handling his horse conveys dust from the animal's coat to the loaves he delivers.

Last year the medical officer of health invited the Master Bakers' Association to consider the advisability of wrapping all bread before delivery, and although the association agreed with the desirability of the recommendation, they felt the increased cost to the consumer would not warrant the innovation. This is a matter which rests almost entirely with the public, for if there were a demand for wrapped bread the bakers would supply it, and in my opinion it is far better to educate the public to demand clean food than to introduce irksome and irritating legislation, which is at least only a last resort after all persuasive powers have failed. One firm who wrap a portion of their supply find that the customers take wrapped bread for a time and then revert back to unwrapped bread for no ostensible reason except, of course, the increased cost.

### *Restaurants.*

There are 193 restaurants and eating houses in the city, and these are periodically inspected by the district sanitary inspectors. Advantage has been taken of the provision of the Public Health Act 1925 regarding protection of foodstuffs which together with the application of the Factory and Workshops Act in regard to restaurant kitchens has enabled us to procure many satisfactory improvements in the conditions of restaurant kitchens. In some



instances, however, I have found that compliance with one or more of the provisions of section 72 of the Public Health Act, 1925, has involved alteration to premises by the occupier instead of the owner, and this has proved a hardship.

### *Fried fish shops.*

The business of fish-frying has been declared an offensive trade and since 1926 the Health Committee has granted annual consents for the establishment of approved new businesses.

The committee have adopted very stringent regulations to which new applicants must conform before consent is given. These comprise adequate ventilation of the shop premises; painting of the walls and ceilings, the provision of a raised concrete base for the range, a separate cleaning shed with impervious walls and floors, a properly glazed stone sink, and sufficient drainage, and separate galvanised bins with covers for waste material. Regular removal of fish refuse must be carried out.

There are 210 fried fish shops in the city, 21 of which are subject to annual consents.

### **(c) Adulteration, etc.**

#### *Food and Drugs (Adulteration) Act, 1928.*

In 1929 the Council transferred the control of the food and drugs department from the Watch Committee to the Health Committee.

The number of samples taken annually is 1,400, the proportion of samples per thousand of the estimated population being 3.57.

These samples consisted of :—

Ammoniated tincture of quinine, 4; arrowroot, 4; beer, 4; boracic ointment, 4; brandy, 4; bun flour, 1; butter, 187; cheese, 20; cider, 12; citric acid, 3; cocoa, 8; coffee, 8; cream, 16; custard powder, 2; dripping, 12; egg powder, 1; epsom salts, 4; flour, plain, 8; fruits (dried), 16; gin, 6; glauher salts, 4; glycerine, 2; golden syrup, 2; honey, 6; ice cream, 4; jam, 20; lard, 8; margarine, 21; milk, 827; milk (condensed), 8; milk (skim), 12; mineral waters, 16; mustard, 8; pepper, 8; pickles, 2; rice, 8; rum, 6; sal volatile, 4; sauce, 2; sausages, 12; sugar, 2; sweet-meats, 4; table jelly, 12; tapioca, 4; tartaric acid, 2; tea, 16; tincture of iodine, 5; vinegar, 29; whiskey, 8; wines (British), 8; zinc ointment, 6.

There were 839 samples taken of milk, 45 of which were found adulterated, a percentage of 5.36. This cannot be regarded as a true index of the risk the public take with regard to milk, however, on account of the fact that the inspectors invariably make a selection from particular vendors. There are in the city over a thousand producers and retailers and as samples are selective rather than comprehensive, and all retailers are not regularly visited, it is obvious that the authority cannot ascertain actual statistics.

The number of samples found adulterated last year was 56, a percentage of 4.0 against 5.85 for 1929. This shews a good improvement and is better than the figures for England and Wales.

The samples which were condemned by the public analyst consisted of :—

Butter, 2 ; citric acid, 2 ; milk, 43 ; milk (skim), 2 ; rum, 2 ; tincture of iodine, 1 ; vinegar, 1 ; zinc ointment, 3.

Legal proceedings were taken in 37 cases and penalties were imposed as follows :—

£5 (one case).  
 £3 (one case).  
 £2 (five cases).  
 £1 10s. 0d. (two cases).  
 £1 (four cases).  
 10/- (five cases).  
 5/- (four cases).  
 30/- costs (one case).  
 10/- costs (one case).  
 costs (one case).

Dismissed (eleven cases) ; in two of which cases warranties were pleaded ; and in one case the defendant was bound over in the sum of £5.

A case of more than passing interest was decided in January. A sample of milk was condemned for containing .001% sodium nitrite and .0002% formaldehyde. The defendant put forward the defence that there was no formaldehyde found by his analyst, and the third sample was ordered to be sent to Somerset House who reported that formaldehyde was present. The result was unexpected, as by the time Somerset House received the sample some eight weeks had elapsed since its collection and one was always under the impression that formaldehyde disappeared after a few days. Probably the reason the defendant's analyst did not find the formaldehyde was because he did not look for sodium nitrite. When both these are present in milk, a test for formaldehyde alone is negative, but if nitrite is first tested for and detected, formaldehyde can be traced. Sodium nitrite may be described as a cloak for formaldehyde, and was first used in this way about ten years ago.

### *Warranties.*

Much could be said upon the subject of warranties, but two recent incidents reveal the risk the authority runs if every warranty is accepted without question or investigation. In one case it was proved in evidence that the warranty had been made out by the vendor himself and in the other that the warranty was obtained some days after the sample had been procured. In many cases defendants prove their warranty to the satisfaction of the Court simply because the warrantor does not appear at the hearing and his non-appearance being looked upon as guilt, the blame for the deficiency is thrown on him, whereas it is often due either to ignorance of how to move in the matter or merely indifference.

The "appeal to the cow" made famous since *Hunt v. Richardson*, has added considerably to the difficulties we have had to contend with and I cordially endorse the resolution passed at the annual general meeting of the Association of Municipal Corporations held last year which reads as follows :—

"That the Law Committee be requested to consider the existing law with respect to the sale of food and drugs as determined in the cases of *Hunt v. Richardson* (1916), *Bowen v. Jones* (1917), *Kings v. Merris* (1920) with a view to its amendment, so as to ensure that every purchaser of milk under any circumstances shall be supplied with milk containing not less than a legal standard of milk fat and milk solids other than milk fat and to report thereon to the Council."

The fixing of a legal standard below which milk must not be sold for human consumption is long overdue.

#### *Public Health (Preservatives, etc., in Food) Regulations.*

A matter which gives rise to some anxiety in the administration of the preservatives in food regulations, is the quantity of sulphur dioxide in imported raisins. Other classes of food to which preservatives in specified quantities may be added have been found to be below the limit prescribed, but on several occasions raisins have exceeded the limit of 750 parts per million. Dried fruits are imported under a guarantee which allows merchants to refuse to accept delivery of any consignment within 10 days if on analysis the fruit is found to exceed the limit. In several cases in which we have called the importer's attention to the excess, it has been found that their privately examined sample has not shewn any excess. Variations are apt to occur even in the same package if one sample is taken from the centre and another from the outside ; and I understand that there is also a variation in the actual amount of  $\text{SO}_2$  absorbed by different raisins. One is never certain that two raisins from the same part of the package contain the same quantity of  $\text{SO}_2$ .

In the light of the variations we have found, the great expense incurred by importers in having very many samples analysed as a protection cannot be regarded as any safeguard, as even after all the precautions taken at the port of entry, retailers may still find themselves proceeded against for infringements and the importer called upon to defend the case.

#### *Butter and margarine.*

Three new premises were registered as butter factories during the year, and all butter factories registered with the local authority were inspected.

Four firms were registered to carry on the business of wholesale dealers in margarine, and one firm was registered for the manufacture of margarine.

#### *Poisons and Pharmacy Act, 1908.*

There are twelve premises registered for the sale of poisonous substances for agricultural and horticultural purposes, and inspection has been made of each of these premises.

*Agricultural Produce (Grading and Marking) Act, 1928.*

The cold stores were inspected, also wholesale and retail premises in connection with the marking of eggs.

*Merchandise Marks Act, 1926.*

A number of vendors of apples, tomatoes, currants, sultanas, and raisins have been warned to label imported goods as such. Imported eggs have been found to be badly marked and the matter has been reported to the Ministry of Agriculture. The manner in which this Act is being complied with is far from satisfactory ; and leaflets pointing out the provisions of the Act have been issued to traders concerned, as follows :—

“ Imported foodstuffs of the following kinds must, by law, be marked to show where they came from :—

1. Fresh apples ;
2. Raw tomatoes ;
3. Eggs (hen or duck eggs in shell) ;
4. Dried Eggs ;
5. Currants, sultanas and raisins ;
6. Oat products (oatmeal, rolled oats, oat flour, and groats) ;
7. Honey.

If the goods are from foreign countries, they must be marked either with the word “ Foreign ” or with words which show the country from which they came, such as “ Grown in France,” “ Dutch Produce ” or “ Danish.” If they are imported from overseas parts of the Empire, they must be marked with the word “ Empire ” or with words showing the country from which they came, such as “ Australian Produce,” “ Grown in Guernsey,” or “ Canadian.”

Fresh apples, raw tomatoes, loose currants, sultanas and raisins, and loose oat products must be clearly marked with a show ticket having letters not less than half an inch high *when exposed for sale* in any quantity. These goods must also be marked when actually sold if they are sold in quantities of more than 14 lb., but when sold in quantities of 14 lb. or less they may be handed to the purchaser in unmarked bags.

*Packages* of currants, sultanas and raisins made up before reaching the retailer ; packages of dried eggs made up before reaching the retailer ; containers of honey ; and packages of oat products made up before reaching the retailer, should be marked in capital letters not less than one-twelfth of an inch in height where the longest side of the package is not more than six inches, and not less than one-eighth of an inch in height when the longest side is more than six inches.

*Blends or mixtures* of oat products, or of honey, may be marked simply “ Blended Imported.”

*Imported eggs* must be plainly stamped on the shell of each egg in letters not less than one-twelfth of an inch high.”



*Destructive Insects and Pests Acts, 1877-1907.*

The various premises scheduled as infected with wart disease of potatoes, together with several market gardens and allotments were visited by the inspector of the Ministry of Agriculture and Fisheries, and the inspector of the local authority.

Wart disease was found to be present on three premises which has been previously scheduled as infected; and the disease was found to be present at two new centres.

*Fertilisers and Feeding Stuffs Act, 1926.*

During the year 13 samples were collected and submitted to the city analyst. Four of these samples fell outside the limit of variation permitted by the Act. The Ministry of Agriculture and Fisheries would not sanction proceedings being instituted in either case.

**(d) Chemical and bacteriological examination of food.**

The city chemical and bacteriological laboratories for the examination of food, situated at 36 Queen Square, are under the direction of Edward Russell, Esq., B.Sc. (Lond.), F.I.C., F.C.S., who issues a separate report containing full particulars of the nature and number of samples submitted for analysis during the year.

## VII.—PREVALENCE AND CONTROL OVER INFECTIOUS AND OTHER DISEASES.

In tables in this section will be found the numbers, age groups and districts of cases of infectious disease notified during the year 1930.

The following table will show the *prevalence* of the notifiable diseases during the year :—

Disease.	1930		1920—1929	
	No. of cases	Case rate per 100,000	Average No. of cases	Case rate per 100,000
Smallpox ... ..	—	—	8	2.
Diphtheria ... ..	1,484	380.	921	239.
Erysipelas ... ..	174	44.	169	44.
Scarlet fever ... ..	811	207.	1,331	346.
Enteric fever ... ..	21	5.	33	9.
Acute primary or influenzal pneumonia ... ..	308	78.	459	122.
Puerperal fever ... ..	18	5.	32	8.
Ophthalmia neonatorum ... ..	19	5.	71	18.
Pulmonary tuberculosis ... ..	567	145.	784	204.
Other forms of tuberculosis ... ..	84	21.	183	47.

In one only of these diseases was the incidence in excess of the average during the preceding ten years, viz. : diphtheria.

The following table will show the *deaths and fatality* of the chief infectious diseases :—

Disease.	1930.		1920—1929.	
	No. of deaths	Case mortality %	Average No. of deaths	Case mortality %
Enteric fever ... ..	1	4.8	3.6	10.9
Scarlet fever ... ..	2	0.2	11.1	0.8
Diphtheria ... ..	41	2.8	59.8	6.5
Influenza (including influenzal pneumonia) ... ..	26	8.4	137.5	29.3
Encephalitis lethargica ... ..	7	100.0	15.0	33.8
Cerebro-spinal fever ... ..	4	66.7	2.6	55.3

**Notifiable Diseases (other than tuberculosis) during 1930**  
(including Port cases).

NOTIFIABLE DISEASES.	CASES NOTIFIED IN WHOLE DISTRICT.							CASES ADMITTED TO HOSPITAL	DEATHS IN WHOLE DISTRICT.									
	At all ages.	At ages—years.							All ages	At ages—years.								
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65			65 and upwards	Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards	
Small-pox	...	...	...	...	...	...	...	60	...	...	...	...	...	...	...	...	...	...
Scarlet fever	811	4	160	507	93	41	6	1,395	...	...	...	...	...	...	...	...	...	...
Diphtheria	1,484	8	259	976	156	73	11	...	...	...	...	...	...	...	...	...	...	...
Enteric fever (including paratyphoid)	22	...	3	8	3	5	3	12	...	...	...	...	...	...	...	...	...	...
Puerperal fever	18	...	...	...	6	12	...	8	...	...	...	...	...	...	...	...	...	...
Puerperal pyrexia	71	...	...	...	28	43	...	3	...	...	...	...	...	...	...	...	...	...
Pneumonia	309	...	27	46	45	81	63	89	...	...	...	...	...	...	...	...	...	...
Erysipelas	174	5	5	4	19	48	70	58	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal meningitis	6	...	1	1	...	1	...	4	...	...	...	...	...	...	...	...	...	...
Poliomyelitis	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malaria	4	...	...	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	26	...	...	...	3	6	4	24	...	...	...	...	...	...	...	...	...	...
Encephalitis lethargica	7	...	...	...	1	4	1	2	...	...	...	...	...	...	...	...	...	...
Polio encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia neonatorum	19	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	2,952	48	456	1542	355	317	158	1,655	348	72	23	19	35	69	74	...	...	...

1930.

## Notifications of infectious disease in quarters.

(Port cases excluded).

Disease.	Quarters.				Total	Attack rate per 1,000
	1st.	2nd	3rd.	4th		
Small-pox ... ..	...	...	...	...	...	...
Cholera ... ..	...	...	...	...	...	...
Plague ... ..	...	...	...	...	...	...
Diphtheria (including mem- branous croup) ...	600	246	250	388	1,484	3.80
Erysipelas ... ..	63	36	28	47	174	0.44
Scarlet fever ... ..	281	177	145	208	811	2.07
Typhus fever ... ..	...	...	...	...	...	...
Enteric fever ... ..	9	7	4	1	21	0.05
Relapsing fever ... ..	...	...	...	...	...	...
Continued fever ... ..	...	...	...	...	...	...
Cerebro-spinal meningitis...	2	2	1	1	6	0.02
Poliomyelitis ... ..	...	...	...	1	1	0.003
Acute primary pneumonia	85	43	40	103	271	0.69
„ influenzal pneumonia	16	3	3	15	37	0.09
Malaria ... ..	1	1	...	...	2	0.005
Dysentery ... ..	1	...	23	1	25	0.06
Acute encephalitis lethargica	1	2	2	2	7	0.02
Acute polio encephalitis ...	...	...	...	...	...	...
Puerperal fever ... ..	6	4	3	5	18	0.05
Puerperal pyrexia... ..	22	19	12	18	71	0.18
Ophthalmia neonatorum ...	4	8	5	2	19	0.05
Pulmonary tuberculosis ...	(13) 161	(10) 147	(15) 122	(12) 137	(50) 567	1.45
Tuberculous meningitis ...	(1) 2	(4) 5	3	(2) 2	(7) 12	0.03
Tuberculosis of peritoneum and intestines ... ..	(1) 2	(1) 9	(1) 6	5	(3) 22	0.06
Tuberculosis of spinal column	(2) 3	5	...	(4) 4	(6) 12	0.03
Tuberculosis of joints ... ..	4	4	(1) 2	2	(1) 12	0.03
Tuberculosis of other organs	(3) 8	(3) 9	(4) 2	(1) 7	(11) 26	0.07
<b>TOTAL ...</b>	<b>1,271</b> (20)†	<b>727</b> (18)†	<b>651</b> (21)†	<b>949</b> (19)†	<b>3,598</b> (78)†	<b>9.20</b>

† Cases coming to the knowledge of the M.O.H. otherwise than by notification (not included in the totals of notifications).

A noteworthy feature in the above table is the large number of cases of diphtheria notified—1,484 as compared with 1,130 in 1929 and 599 in 1928. With the exception of dysentery the numbers notified in all other diseases were smaller and the total number for all diseases was only 3,598 as compared with 3,960 in 1929.



1930.

## Notifications of infectious disease, at ages.

(Port cases excluded).

NOTIFIABLE DISEASES	CASES NOTIFIED IN WHOLE DISTRICT.								Port cases
	At all ages	At ages—years.							
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards	
Small-pox .. .. .	..	..	..	..	..	..	..	..	..
Cholera .. .. .	..	..	..	..	..	..	..	..	..
Plague .. .. .	..	..	..	..	..	..	..	..	..
Diphtheria (including membranous croup) .. .. .	1,484	8	259	976	156	73	11	1	..
Erysipelas .. .. .	174	5	5	4	19	48	70	23	..
Scarlet fever .. .. .	811	4	160	507	93	41	6	..	..
Typhus fever .. .. .	..	..	..	..	..	..	..	..	..
Enteric fever .. .. .	21	..	3	8	3	4	3	..	1
Relapsing fever .. .. .	..	..	..	..	..	..	..	..	..
Continued fever .. .. .	..	..	..	..	..	..	..	..	..
Cerebro-spinal meningitis ..	6	3	1	1	..	1	..	..	..
Poliomyelitis .. .. .	1	..	1	..	..	..	..	..	..
Acute primary pneumonia ..	271	8	26	44	36	74	52	31	1
„ influenzal pneumonia ..	37	1	1	2	8	7	11	7	..
Malaria .. .. .	2	..	..	..	..	2	..	..	2
Dysentery .. .. .	25	..	..	..	3	5	4	13	1
Acute encephalitis lethargica ..	7	..	..	..	1	4	1	1	..
Acute polio encephalitis ..	..	..	..	..	..	..	..	..	..
Puerperal fever .. .. .	18	..	..	..	6	12	..	..	..
Puerperal pyrexia .. .. .	71	..	..	..	28	43	..	..	..
Ophthalmia neonatorum .. ..	19	19	..	..	..	..	..	..	..
Pulmonary tuberculosis .. ..	(50) 567	(1) ..	(2) 8	(1) 72	(8) 151	(17) 233	(15) 90	(6) 13	1
Tuberculous meningitis .. ..	(7) 12	..	(5) 4	(1) 4	(1) 1	3	..	..	..
Tuberculosis of peritoneum and intestines .. .. .	(3) 22	1	10	6	(1) 4	(1) 2	(1) ..	..	..
Tuberculosis of spinal column ..	(6) 12	1	2	1	(2) 4	(2) 5	(1) ..	..	..
Tuberculosis of joints .. .. .	(1) 12	1	4	3	2	2	..	..	..
Tuberculosis of other organs ..	(11) 26	1	(4) 7	7	(3) 6	(2) 4	(1) 1	(1) ..	..
TOTALS .. .. .	*(78) 3,598	(1) 50	(13) 491	(2) 1,635	(15) 521	(22) 563	(18) 249	(7) 89	6

\* Cases coming to the knowledge of the M.O.H. otherwise than by notification (not included in totals of notifications).

Of the total number of cases of infectious diseases notified during the year, 45% were between the ages of five and fifteen years (school age).

1930.

**Notifications of infectious disease in registration sub-districts**  
(Port cases excluded).

NOTIFIABLE DISEASES	Total	TOTAL CASES NOTIFIED IN EACH DISTRICT.								Port Cases
		Ashley	Bristol South	Bristol Central	Clifton	St. George	Stapleton	Westbury-on-Trym	Public Insts	
Small-pox .. .. .	..	..	..	..	..	..	..	..	..	..
Cholera .. .. .	..	..	..	..	..	..	..	..	..	..
Plague .. .. .	..	..	..	..	..	..	..	..	..	..
Diphtheria (including membranous croup) ..	1,484	214	146	100	129	539	246	60	50	..
Erysipelas .. .. .	174	22	29	18	21	38	19	12	15	..
Scarlet fever .. ..	811	123	182	62	82	201	103	46	12	..
Typhus fever .. .. .	..	..	..	..	..	..	..	..	..	..
Enteric fever .. ..	21	5	6	3	3	3	..	1	..	1
Relapsing fever .. ..	..	..	..	..	..	..	..	..	..	..
Continued fever .. ..	..	..	..	..	..	..	..	..	..	..
Cerebro-spinal meningitis	6	1	3	..	..	1	..	1	..	..
Poliomyelitis .. ..	1	..	..	..	..	..	..	1	..	..
Acute primary pneumonia	271	38	62	24	31	81	21	10	4	1
„ influenzal pneumonia	37	5	8	4	5	12	1	..	2	..
Malaria .. .. .	2	..	1	..	..	1	..	..	..	2
Dysentery .. .. .	25	1	..	..	..	..	..	..	24	1
Acute encephalitis lethargica	7	1	4	1	..	..	..	1	..	..
Acute polio encephalitis	..	..	..	..	..	..	..	..	..	..
Puerperal fever .. ..	18	1	3	2	2	4	1	..	5	..
Puerperal pyrexia.. ..	71	6	7	1	2	10	6	4	35	..
Ophthalmia neonatorum	19	3	5	2	..	3	2	2	2	..
Pulmonary tuberculosis .. (50)	567	(10) 73	(9) 115	(12) 71	(3) 58	(6) 132	(5) 74	(1) 31	(4) 13	1
Tuberculous meningitis .. (7)	12	1	1	2	1	2	3	2	..	..
Tuberculosis of peritoneum and intestines .. (3)	22	3	2	1	1	12	3	..	..	..
Tuberculosis of spinal column .. .. (6)	12	(1) 2	(1) 1	(1) 1	(1) 1	(2) 4	(1) 1	..	..	..
Tuberculosis of joints .. (1)	12	..	3	1	1	(1) 5	2	..	..	..
Tuberculosis of other organs (11)	26	(4) 1	(2) 7	3	6	(2) 5	(1) 4	..	(2) ..	..
TOTALS * (78) ..	3,598	(15) 500	(14) 585	(15) 296	(6) 343	(10) 1051	(10) 489	(2) 172	(6) 162	6

\* Cases coming to the knowledge of the M.O.H. otherwise than by notification (not included in totals of notifications).

**Smallpox.**

Year	No. of cases	No. of deaths	Case rate per 100,000	Death rate per 100,000	Fatality (case mortality %)
1901-1905	99	6	5.8	3.5	6.06
1906-1910	84	10	4.5	0.5	11.9
1911-1915	94	10	5.2	0.5	10.64
1916-1920	1	—	0.6	—	—
1921-1925	8	1	0.5	0.05	12.5
1926-1930	71	—	3.7	—	—
1919	—	—	—	—	—
1920	—	—	—	—	—
1921	7	1	1.8	0.2	14.2
1922	—	—	—	—	—
1923	—	—	—	—	—
1924	1	—	0.2	—	—
1925	—	—	—	—	—
1926	—	—	—	—	—
1927	18	—	4.6	—	—
1928	51	—	13.1	—	—
1929	2	—	0.5	—	—
1930	—	—	—	—	—

No case of smallpox was reported during the year 1930. Twenty-five visits were paid to suspected cases for the purpose of diagnosis at the request of medical practitioners.

*Vaccination.*

Under the powers of the Local Government Act, 1929 the Council on 25th July, 1929, resolved that the functions relating to vaccination be delegated to the Health Committee and that the officers wholly engaged on these duties be placed under the control of that committee.

Eight public vaccinators (part time) and two vaccination officers (one whole time) have been transferred under this resolution. The city is divided into eight districts for the purposes of the Vaccination Acts.

On the recommendation of the Health Committee the Council on 25th March, 1930, resolved to continue the work under the Vaccination Acts and Orders under the same conditions as have prevailed hitherto and for that purpose to continue the existing contracts with public vaccinators and the appointment of the existing vaccination officers with the additional appointment of the medical officer of health as principal vaccination officer.

The following table summarises the work of the vaccination officers for the year up to 31st December, 1930 :—

Year	No. of births	Certificates of primary vaccination.	Statutory declarations.	Certificates of postponement.	Certificates of insusceptibility	Un-accounted for.
1930	6,157	1,917	3,027	200	23	990
1929	6,095	1,644	3,087	206	18	1,140

In addition 57 revaccinations were registered by the vaccination officer. No contacts of cases of smallpox were vaccinated or revaccinated under the Public Health (Smallpox) Regulations, 1917.

It will be seen that the ratio of primary vaccination to births is as 1 to 3 approximately.

### Diphtheria (including Membranous Croup).

Year	No. of cases	No. of deaths	Case rate per 100,000	Death rate per 100,000	Fatality (case mortality %)
1901-1905	5,223	596	306	34	11.39
1906-1910	3,957	312	207	67	7.9
1911-1915	3,127	198	174	11	6.33
1916-1920	2,607	198	485	11	7.6
1921-1925	5,156	367	263	19	7.11
1926-1930	4,579	194	236	10	4.24
1919	448	27	124	7	6.0
1920	965	78	256	20	8.0
1921	1,426	107	373	28	7.5
1922	886	74	230	19	8.3
1923	737	49	191	12	6.6
1924	979	63	253	16	6.4
1925	1,128	74	292	19	6.6
1926	711	43	185	11	6.0
1927	653	31	169	8	4.7
1928	599	17	153	4	2.8
1929	1,132	62	289	16	5.5
1930	1,484	41	380	10	2.8

1930	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Notifications ...	600	246	250	388	1,484
Deaths ...	24	3	4	10	41

Diphtheria, which was prevalent in the fourth quarter of 1929, reached its peak in February 1930—the maximum number of cases notified being 66 in the week ending 1st February. While 40% of the notifications (and 58% of the deaths) occurred in the first quarter, the disease remained prevalent throughout the year except for 10 weeks in May and July when the cases notified fell below 15 cases per week.

It is interesting to record that whereas the attack rate has increased from 2.90 per 1,000 in 1929 to 3.80 per 1,000 in 1930, the death rate has fallen by 0.06 per 1,000 and the case mortality by 2.7 per cent.



*Pathological Examinations.*

1930	At Bristol University Laboratory.	At City Laboratories	Total
<b>VIRULENCE TESTS.</b>			
Virulent ... ..	7	—	7
Non-virulent ... ..	2	—	2
No K.L.B. ... ..	4	—	4
<b>SWABS.</b>			
Positive K.L.B. ... ..	91	2,556	2,647
Suspicious organisms ... ..	30	5,287	5,317
Negative ... ..	356	9,908	10,264
Totals ... ..	477	17,751	18,228

*Diphtheria in an institution.*

During the month of August, four cases of diphtheria had been reported in a home accommodating a large number of children. The help of this department was sought in the matter. Thereupon, the deputy medical officer of health visited the institution, examined all the children and staff, and swabbed the nose and throat of sixteen children. Five of these swabs were found to be positive for diphtheria, and the children were removed to hospital.

Two further cases were notified on the 10th September, so it became necessary to make a still fuller investigation. The deputy medical officer of health again visited the home on the 11th September, and discussed in more detail with the principal such matter as administration, routine in dormitories, the washing facilities, health of the staff, entrants to the home and control of visiting.

All the children were examined and placed into four groups as follows :—

- GROUP 1. Children who were apparently quite well and who had always been well, whilst inmates of the institution.
- GROUP 2. Children who were stated to be subject to sore throats, who had enlarged tonsils, or who were noted to have "watery noses."
- GROUP 3. Children suspicious on clinical examination, who had sore throats or nasal excoriations.
- GROUP 4. One child who appeared to be suffering from early diphtheria. She was at once removed to hospital (the throat swab later proving positive).

All tooth brushes were destroyed and a new supply obtained. Holidays were cancelled and an embargo placed on visitors to the home. Instructions were given that groups 1, 2 and 3 were to be kept entirely separate at lessons, at play, in the dormitories, and that each group was to have its own china, cutlery, etc.

All the children (68) were swabbed (nose and throat) with the following results :—

Group 1.	...	6%	positive for diphtheria.
Group 2.	...	27%	" " "
Group 3.	...	33%	" " "

The children giving positive results, either in nose or throat, were isolated under special conditions at Ham Green Hospital. The three groups were kept strictly apart in the school, and only one other case occurred on the 20th September.

These figures show the relatively high proportion of persons who may become 'carriers' of diphtheria germs during an epidemic, but they may also show that there is a distinct relation between the clinical and bacteriological conditions. In this epidemic five times as many 'carriers' were amongst the children who had unhealthy throats as were amongst healthy children.

In due course immunisation was discussed with the authorities of the school, and the children have now received prophylactic inoculation with toxoid M.T. (B. & W.) mixture.

### *Diphtheria immunisation.*

The most effective weapon in combating the disease is the protection afforded by the safe and efficient method of immunisation in early childhood by means of toxoid.

The Health Committee decided to adopt this method and to make the course available free of charge for all children of school age and under. Medical officers of the maternity and child welfare department hold clinics for this purpose for children under five. By arrangement with the Education Committee inoculations were given by the school medical staff at their clinics, the Health Committee being responsible for all expense. The campaign has been still further extended and arrangements have been made for the treatment to be carried out at the schools by the school medical staff.

The method of treatment adopted is as follows :—

- (a) All children under 10 years are immunised without a preliminary schick test being performed.
- (b) All children over 10 years are schick-tested first to identify any pseudo-positive cases which are liable to give a marked reaction to inoculation.
- (c) Diphtheria prophylactic M.T. Toxoid (B.W. & Co.) is used. Three injections of 1 c.c. are given at intervals of three weeks.
- (d) Pseudo-positive reactors are given a modified course as follows :—

First dose of .1 c.c. followed by .5 c.c. seven days after.

Three weeks later .5 c.c. to 1 c.c. are given, depending on the amount of reaction to the first dose of .5 c.c.

Three weeks after this, the last dose of 1 c.c. is given.

Thus :—

1st day	...	.1 c.c.
8th „	...	.5 c.c.
29th „	...	.5 to 1 c.c.
50th „	...	1 c.c.

- (e) All cases that have undergone a complete course of treatment are tested by the schick method three to four months later before they are declared immune.

The following table shows the number immunised in 1930 at schools, centres, institutions and hospitals (excluding the city isolation hospital at Ham Green, particulars of which are given in the report of the resident medical superintendent on page 135).

	No. Schick tested	No. found positive.	No. receiving full course of immunising inoculation.	No. re-tested after immunising course.	No. tested after immunising course (not originally tested).
(a) In Schools or Infant Welfare Centres ...	98	80	6,437	154	5,894
(b) In hospitals (excluding Ham Green) ...	168	118 (20 pseudo-positive)	87	67	20
Total ...	266	198	6,524	221	5,914

### A Survey of Diphtheria Immunisation Results.

By I. G. DAVIES, M.B., B.S., M.R.C.P., D.P.H.

#### 1. *Education department.*

The total number of cases inoculated since the beginning of the campaign was 5,485, of which 4,611 were not originally tested. After immunisation of these 4,611 cases, 2,500 were found to be negative (i.e., 54% protected), and 1,884 were found to be positive in varying degrees, while 227 did not attend for observation. In these 4,611 cases it is not possible to assess the value of immunisation because they were not originally tested.

There were two deaths from diphtheria, one which had been inoculated twice, and one which had been inoculated three times. In the first case, four days elapsed between the onset of diphtheria and the last inoculation; in the second case, 85 days elapsed.

#### CASES TESTED PRIOR TO INOCULATION.

These numbered 144, and 103 were found to be positive. These 103 positives were then inoculated and again tested three months after inoculation. Sixteen were found to be definitely negative (i.e., 10% protected), and 25 were found to be positive in varying degrees. Sixty-two, however, were not tested so that again these results do not offer much information.

#### 2. *Maternity and child welfare section.*

In this section, 1,892 cases received three inoculations, 1,283 were not tested before inoculation. Of these 1,283 cases, 987 were found to be negative after inoculation (i.e., 77% protected).

#### CASES TESTED PRIOR TO INOCULATION.

These number 99. Of these, 46 were negative before inoculation, and 53 were positive. These 53 cases were retested three months after inoculation, and 41 were found to be negative (i.e., 77% protected).

A certain number of children contracted diphtheria during the process of immunisation and can be placed in these groups ;—

- |     |                                       |  |
|-----|---------------------------------------|--|
| (a) | Those who contracted diphtheria after | one injection                                    |
| (b) | “ “ “ “ “                             | two “  |
| (c) | “ “ “ “ “                             | three “  |
| (d) | “ “ “ “ “                             | three injections and who had been schick tested. |

Group (a). These numbered 17. Four were of virulent type, 11 were mild or moderate and two were doubtful cases.

Group (b). These numbered 13. Four were of virulent type, the onset of diphtheria occurring from 156-311 days after the second inoculation. There were five mild or moderate cases and three doubtful cases. There was one death in this group occurring four days after the second inoculation.

Group (c). This group numbered 34. Nine of these were cases of virulent type ; 22 were of mild or moderate type ; 2 were carriers. There was one death, the onset of diphtheria occurring 85 days after the third inoculation, the disease being of virulent type.

Group (d). This group numbered 10. Five were schick negative and five were schick positive. Of the five schick negative group four cases were moderate in type, occurring at intervals varying from 185 to 204 days. One case was doubtful. Of the five schick positives, one was a case of virulent type, two were mild, one moderate and one doubtful.

#### *Comment.*

The average response to the invitation for immunisation is about 50 per cent. Refusal on the part of the parent can be assigned chiefly to the following reasons :—

- (1) Lack of knowledge of the nature of the immunisation process.
- (2) Prejudice against any form of inoculation, this again in great part being due to incorrect ideas regarding the term “inoculation.”

A further difficulty is found in the fact that a certain number of children drop out after the first or second inoculation or having had the three inoculations do not present themselves for the final schick test. Quite a number of refusals of the test are due to lack of knowledge of the nature of the test. A number of children also drop out during immunisation due to intercurrent illness, the parent being unwilling to subject the child to inoculation if it has had recently any illness, however mild.

Active immunity takes several weeks to months to develop. This would account for many of the cases which developed diphtheria after one, two, or three injections. It has also been shown that a certain number of schick negative reactors relapse to the schick positive state.

Reverting to group (d), it would appear somewhat disconcerting to find cases of clinical diphtheria occurring in schick negative children and at such intervals (185-204 days). It is to be noted, however, that the four cases were of moderate character.



With regard to reaction after immunising doses of toxoid children differ considerably. Several cases have been noted of fairly severe reaction—headache—vomiting—T.102—malaise for 24 hours with deltoid tenderness. I have noted five such cases which were undoubtedly due to the immunising injection.

#### **Supply of diphtheria anti-toxin to medical practitioners.**

In order to facilitate the immediate application of anti-toxin in diphtheria, the following arrangements have been in force since October, 1924 :—

On the medical officer of health's order, a firm of chemists in the city will issue to medical practitioners a stock of anti-toxin not exceeding 24,000 units. This is in 8 c.c. phials containing 8,000 units concentrated serum, which is regarded as the minimum therapeutic dose irrespective of age for the present type of diphtheria. Certificates for free supply to patients unable to pay are also provided.

After six months, the chemists recall the surplus anti-toxin, furnish a fresh supply and collect the value of that used for patients who can afford to pay. If used for a patient unable to pay, the practitioner hands a certificate to that effect to the chemists. The Health Committee is responsible for the payment of the latter cases only.

In order to prevent the accumulation in the area of a large surplus of anti-toxin, it is necessary to limit the issue usually to 24,000 units. This stock can be renewed as often as required, and should any special circumstances exist rendering it probable that a practitioner will require larger amounts, the above quantity can be exceeded on application to the medical officer of health.

In case of special emergency, anti-toxin can be obtained at the Health Offices, 40 Prince Street, at any hour of the day or night, including Sundays.

Instructions as to dosage have also been drawn up by the resident medical superintendent, Ham Green Hospital, for the information of medical practitioners.

#### **Scarlet Fever.**

Year	No. of cases	No. of deaths	Case rate per 100,000	Death rate per 100,000	Fatality (case mortality %)
1901-1905	9,441	226	554	13.	2.4
1906-1910	4,299	87	230	4.6	2.02
1911-1915	6,551	74	366	4.1	1.13
1916-1920	2,938	30	166	1.7	1.02
1921-1925	7,197	81	374	4.2	1.12
1926-1930	5,514	24	284	1.2	0.43
1919	363	2	100	0.5	0.5
1920	1,411	9	375	2.3	0.6
1921	1,576	7	412	1.8	0.4
1922	1,852	18	482	4.6	0.9
1923	1,444	19	374	4.9	1.3
1924	831	8	215	2.	0.9
1925	1,494	29	387	7.5	1.9
1926	951	9	248	2.	0.9
1927	1,433	2	371	0.5	0.1
1928	1,211	3	310	0.8	0.25
1929	1,108	8	283	2.	0.7
1930	811	2	207	0.5	0.25

1930	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Notifications ...	281	177	145	208	811
Deaths ...	2	—	—	—	2

Eight hundred and eleven (811) cases of this disease were notified during the year, a decline of 297 compared with 1929, and fewer than notified in any year since 1919.

The disease has been of a mild nature, the fatality rate being 0.25 per cent. The attack rate is also the lowest since 1919.

For further information concerning return cases, Dick immunisations and treatment with scarlet fever anti-toxin *vide* pages 132 and 134-5.

### Enteric Fever.

(Including Typhoid and Paratyphoid A. & B. Fevers).

Year	No. of cases	No. of deaths	Case rate per 100,000	Death rate per 100,000	Fatality (case mortality %)
1901-1905	982	158	58	93	16.1
1906-1910	448	67	24	36	35.3
1911-1915	434	52	24	3	12.0
1916-1920	221	24	13	1	10.9
1921-1925	163	16	9	1	9.8
1926-1930	139	17	7	0.9	12.2
1919	33	6	9	1.6	18.1
1920	48	4	12	1	8.3
1921	35	2	9	0.5	5.7
1922	31	1	8	0.2	3.2
1923	32	5	8	1.2	15.6
1924	42	4	10	1	9.5
1925	23	4	6	1	17.4
1926	16	3	4	0.8	18.7
1927	27	3	7	0.7	11.1
1928	44	6	11	1.5	13.6
1929	30	4	7	1	13.3
1930	22	1	5	0.2	4.5

1930	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Notifications :					
Typhoid ...	1	1	—	1	3
Paratyphoid	9	6	4	—	19
Total ...	10	7	4	1	22
Deaths ...	—	—	1	—	1

Twenty-two cases of enteric fever, including 19 paratyphoid were notified in Bristol during the year with one death certified as due to paratyphoid. This gives a case mortality of 4.5 per cent. compared with 13.3 in 1929 and is the lowest recorded since 1922 (3.2%). The attack rate of 5.0 per 100,000 is also lower than any year since 1919, with the single exception of 1926 which has an attack rate of 4.0 and a fatality case rate of 18.7 per cent.

*Pathological and Bacteriological Examinations*

1930	At Bristol University Laboratory.		Total
	Positive	Negative.	
ENTERIC FEVER			
Agglutination test ...	3	55	58
Faeces and urine ...	—	4	4
PARATYPHOID "A"			
Agglutination test ...	—	57	57
Faeces and urine ...	—	4	4
PARATYPHOID "B"			
Agglutination test ...	16	42	58
Faeces and urine ...	—	4	4
TOTAL ...	19	166	
	185		185

**Dysentery.**

Twenty-six cases of dysentery were notified during 1930, including two from the Mental Hospital and twenty-two from Stapleton Institution. In all these 24 cases the diagnosis was confirmed pathologically. Of the other two cases, one of amoebic dysentery contracted either in Cape Verde Island or Madeira was confirmed pathologically, and the other, a port case—native seaman from Ceylon—the diagnosis, however, was not confirmed pathologically.

Details of bacteriological work in 1930 will be found on page 41.

**Pneumonia.**

The following cases of \*acute primary pneumonia and acute influenzal pneumonia were reported during the year. Of the cases notified, 70 had a fatal termination.

## AGE GROUPS.

1930	under 1 yr.	1-5	5-15	15-25	25-45	45-65	65-	Total
NOTIFICATIONS								
Primary pneumonia ...	8	26	44	37	74	52	31	272
Influenzal pneumonia ...	1	1	2	8	7	11	7	37
TOTAL ...	9	27	46	45	81	63	38	309
Deaths ...	—	3	3	7	12	21	24	70

## QUARTERS.

1930	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Notifications : Primary pneumonia	85	44	40	103	272
Influenzal pneumonia	16	3	3	15	37
Total ...	101	47	43	118	309

**Malaria.**

Four cases were notified during the year, including two port cases.

**Encephalitis lethargica.**

Seven cases of encephalitis lethargica were notified during the year. Two were admitted to hospital, and seven died.

## AGE GROUPS.

1930	under 1	1-5	5-15	15-25	25-45	45-65	65-	Total
Notifications ...	—	—	—	1	4	1	1	7
Deaths ...	—	—	—	—	4	2	1	7

In the report for 1927 our local experience in dealing with patients suffering from the after-effects of encephalitis lethargica is given in detail.

**Poliomyelitis.**

One case was reported during the year, an infant under 3 years, and one death of a woman aged 39 years, which had been notified as cerebro-spinal meningitis.

## QUARTERS.

1930	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Notifications	—	—	—	1	1
Deaths	—	1	—	—	1

**Cerebro-spinal meningitis.**

Six cases were notified with six deaths, one of which was certified as acute anterior poliomyelitis. The following shows the distribution of the cases :—

Bristol South	...	3
Ashley ...	...	1
St. George	...	1
Westbury-on-Trym	...	1

The ages of the cases ranged from 7 weeks to 39 years and there was no indication of any connection in any of these cases.



**Erysipelas.**

One hundred and seventy-four cases were notified with ten deaths giving a case mortality of 5.7%. Nine of these deaths occurred in institutions.

**AGE GROUPS.**

1930	under 1	1-5	5-15	15-25	25-45	45-65	65-	Total
Notifications ...	5	5	4	19	48	70	23	174
Deaths ...	1	—	—	—	1	5	3	10

**QUARTERS.**

1930	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Notifications ...	63	36	28	47	174
Deaths ...	2	4	1	3	10

**Measles.**

Notification of measles was discontinued in Bristol in 1920 so that the only figures available relative to the number of cases that occurred in the city were obtained from the school cards and from returns of other cases discovered in the homes by nurses and health visitors.

During the year 4,042 cases of measles were reported to the department in this way, mostly during the fourth quarter when the disease was prevalent, and 52 deaths including 34 under three years of age occurred. These figures compare with 457 cases and one death reported in 1929.

	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Cases	20	23	249	3,750	4,042
Deaths	—	—	—	52	52

**DEATHS.—AGES.**

0-1	1-2	2-3	3-4	4-5	5-10	Total
5	21	13	3	3	7	52

Twenty-four cases of german measles were also reported (no deaths).

### Whooping cough.

There were 738 cases of whooping cough notified through the schools or discovered in the houses by nurses and health visitors and 20 deaths occurred as below :—

1st quarter	2nd quarter	3rd quarter	4th quarter	Total
8	4	4	4	20

Whooping cough must be considered one of the most serious diseases affecting childhood. Not only is it a fatal illness, having caused 20 deaths in this city during last year, but it is a most troublesome disease, usually with a protracted course and followed by much invalidism.

### Mumps.

671 cases were reported through the schools or discovered in the houses by nurses and health visitors. There were no deaths.

### Chicken pox.

1,241 cases were reported through the schools or discovered in the houses by nurses and health visitors.

### Infantile diarrhoea.

Twenty-seven deaths of infants under two years of age were registered during the year. The average number of deaths of infants since 1926 from this disease—30—shows a marked reduction on the recorded mortality during the quinquennium 1911-1915, viz. :—178.

### Work of home nurses.

Three trained nurses are employed full time upon home visiting work in connection with infectious diseases. These nurses visit all cases of notifiable diseases as well as all cases of non-notifiable infections concerning which information has been received from the elementary schools.

Cases of notifiable diseases are visited on the same day as the information is received. In the case of non-notifiable infections such as measles, visits are paid as soon as possible, and instructions given for proper nursing of the child. If conditions for proper nursing in the home are unsatisfactory or if the mother be in poor health, removal to hospital is advised. Suspicious cases are advised to see a doctor, but if circumstances do not permit of this expense, the home nurse takes swabs in the case of diphtheria and gives advice about gargling and nasal spraying and douching. The cases are revisited every few days.

Other work carried out by the home nurses includes advice concerning scabies, verminous and neglected persons and arrangements are made by them for disinfecting baths.

The following table gives the total number of notifiable and non-notifiable infectious diseases visited by the three home nurses during the year 1930 :—

Scarlet fever ... ..	791
Diphtheria ... ..	1,411
Enteric fever ... ..	24
Encephalitis lethargica ... ..	7
Anterior poliomyelitis ... ..	1
Polio encephalitis ... ..	—
Cerebro-spinal fever ... ..	6
Malaria ... ..	1
Dysentery ... ..	1
Erysipelas ... ..	155
Measles ... ..	3,909
Whooping cough ... ..	768
Chicken pox ... ..	1,177
Mumps ... ..	686
German measles ... ..	26
Total cases ... ..	8,963

## TUBERCULOSIS.

### *Notifications.*

The following notifications of pulmonary and other forms of tuberculosis were received during the year; the age distribution is also given.

NOTIFICATIONS	Under 1	1-5	5-15	15-25	25-45	45-65	65-	Total noti- fied	Total other- wise than by notifi- cation	Total
Pulmonary tuberculosis ...	—	8	72	151	233	90	13	567	50	617
Tuberculous meningitis ...	—	4	4	1	3	—	—	12	7	19
Tuberculosis of peritoneum and intestines	—	10	6	4	2	—	—	22	3	25
spinal column	—	2	1	4	5	—	—	12	6	18
joints ...	1	4	3	2	2	—	—	12	1	13
other organs...	1	7	7	6	4	1	—	26	11	37
TOTALS ...	2	35	93	168	249	91	13	651	78	729

Of the total of 651 cases notified, 567 or 87% were cases of pulmonary tuberculosis. In addition, 78 cases including 50 pulmonary cases came to the knowledge of the health department otherwise than by notification. This makes a total of 729 cases with 617 or nearly 84% pulmonary.

### *Deaths.*

Tuberculosis (all forms) accounted for 10% of all deaths during 1930 compared with 9.2% in 1929. The death rate per 1,000 from all forms of tuberculosis was 1.1, for 1.01 of which tuberculosis of the respiratory system was responsible.

Below is given the number of deaths in age groups, certified as due to tuberculosis :—

	—1	1—2	2—5	5-15	15-25	25-45	45-65	65-	Total
Tuberculosis of respiratory system ...	1	—	1	2	89	183	95	25	396
Other tuber- culous diseases	—	5	10	10	12	10	8	2	57

When these figures are compared with the previous table, it is seen that 729 cases of tuberculosis came to the knowledge of the medical officer of health and 453 deaths were attributed to all forms of the disease, giving a proportion of 62 deaths per 100 cases. In the case of pulmonary tuberculosis the proportion of deaths to cases is higher, being 64%. The pulmonary form accounted for 87% of deaths from tuberculosis.



Particulars of new cases of tuberculosis and of all deaths from the disease in the area during 1930 are given below.

**New cases and mortality during 1930.**

Age periods			New cases				Deaths			
			pulmonary		non-pulmonary		pulmonary		non-pulmonary	
			M.	F.	M.	F.	M.	F.	M.	F.
0	...	...	—	—	—	2	—	1	—	—
1	...	...	3	5	12	10	—	1	8	7
5	...	...	29	23	7	10	1	—	3	4
10	...	...	8	12	5	4	—	1	2	1
15	...	...	32	42	8	6	20	25	1	6
20	...	...	25	54	2	2	23	21	2	3
25	...	...	73	75	1	8	48	61	2	3
35	...	...	43	42	3	3	48	26	3	2
45	...	...	40	15	—	1	33	22	2	2
55	...	...	24	11	—	—	30	10	2	4
65 and upwards			7	5	—	—	16	9	1	1
Totals	...		284	284	38	46	219	177	26	31
Ratio of non-notified deaths			...	...	...	...	1-13.6	1-11.8	1-2.1	1-2.3

**NOTIFICATIONS AND DEATHS FROM PULMONARY AND OTHER FORMS OF TUBERCULOSIS, 1920-1930.**

			Pulmonary tuberculosis	Other forms of tuberculosis
1920	Notifications, etc.	...	1,062	165
	Deaths	...	365	83
1921	Notifications, etc.	...	911	188
	Deaths	...	358	54
1922	Notifications, etc.	...	824	245
	Deaths	...	403	97
1923	Notifications, etc.	...	846	222
	Deaths	...	367	98
1924	Notifications, etc.	...	797	203
	Deaths	...	364	73
1925	Notifications, etc.	...	742	173
	Deaths	...	367	98
1926	Notifications, etc.	...	754	195
	Deaths	...	374	60
1927	Notifications, etc.	...	783	180
	Deaths	...	397	67
1928	Notifications, etc.	...	704	177
	Deaths	...	338	51
1929	Notifications, etc.	...	620	177
	Deaths	...	402	63
1930	Notifications, etc.	...	610	106
	Deaths	...	396	57

	No. of Beds	ADMITTED.			DISCHARGED.			DIED.			TRANSFERRED.		
		M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
EARLY CASES.													
Winsley Sanatorium, nr. Bath	58 52	90	72	162	87	64	151	1	1	2	6	3	9
Ham Green Sanatorium, Pill, near Bristol		69	70	139									
ADVANCED CASES.													
Ham Green Tuberculosis Hospital	72	75	54	129	99	89	188	56	29	85	7	1	8
Ham Green Red Cross Block	12												
CHILDREN (under 16).													
Frenchay Park Sanatorium, Frenchay, nr. Bristol	35	33	40	73	32	34	66	1	2	3	1	3	4
SURGICAL CASES.													
Cossham Hospital, Kingswood, Bristol	9	16	13	29	15	15	30	..	1	1	1	..	1
Lord Mayor Treloar Cripples' Hospital, Alton, Hants	..	1	..	1	1	1	2	..	..	..	..	..	..
Winford Orthopaedic Hospital, nr. Bristol	..	9	6	15	6	2	8	1	1	2	..	1	1
Heatherwood Hospital, Ascot, Berks	..	..	..	..	2	2	4	..	..	..	1	..	1
Melton Lodge, Gt. Yarmouth	..	1	..	1	..	..	..	..	..	..	..	..	..
TOTALS	294	255		549	242	207	449	59	34	93	16	8	24

During the year the following cases were also admitted to and discharged from various outside institutions :

	ADMITTED.			DISCHARGED.			DIED.			TRANSFERRED.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
<b>PULMONARY.</b>												
Burrow Hill Colony	2		2	1		1						
Nordrach-on-Mendip Sanatorium, Blagdon, Somerset		1	1									
<b>NON-PULMONARY.</b>												
Wingfield Orthopaedic Hospital, Headington, Oxford	1		1									
Cottage Home, Almondsbury				1		1						
Morland Hall, Alton	1		1									
North Devon Convalescent Children's Home	1	1	2									
Sanatorium, Leysin, Switzerland	1		1									
TOTALS	6	2	8	2		2						
GRAND TOTALS	300	257	557	244	207	451	59	34	93	16	8	24

*Pathological and Bacteriological Examinations.*

1929	At Municipal Dispensary laboratory		At City laboratories		Total
	positive	negative	positive	negative	
TUBERCULOSIS : Sputum ...	148	662	218	597	1,625

**Tuberculosis Dispensaries.**

Report by C. J. CAMPBELL FAILL, F.R.C.P., Ed.,  
Tuberculosis Officer.

*Staff.*

Tuberculosis officer ... C. J. Campbell Faill, F.R.C.P., Ed.

Assistant tuberculosis officer J. Scott Currie, M.B., Ch.B.

Dispensary clinic nurses, 3; laboratory assistant and X-ray operator, 1;  
dispenser (part-time), 1; clerks, 6.

*Situation of dispensaries.*

19 Portland Square, and 4 Redcliffe Parade West.

*Public Health (Prevention of Tuberculosis) Regulations, 1925.*

No notices have up to the present been served under article 5 of  
the regulations.

*Public Health Act, 1925, section 62.*

No action yet taken under this section.

*Dispensary work.*

Total patients treated ... ..	2,816
Total number of examinations ... ..	3,727
Total attendances of school children ... ..	4,493
Total injections ... ..	303
Artificial pneumothorax ... ..	227
No. of visits to patients by tuberculosis nurses and health visitors	9,674
No. of cases seen by consulting surgeon ... ..	134
No. of attendances of cases seen by consulting surgeon...	217
No. of attendances for ultra-violet light treatment ... ..	1,568

The coming into force of the Local Government Act, 1929, has  
added to the work of the dispensary rather less than was expected  
and has been productive of good in two directions.

In the first place, since Southmead Hospital has been transferred  
to the Health Committee, all admissions to and discharges from that  
institution, of tuberculous persons, is done through the dispensary  
as in the case of Ham Green. Thus the administrative control of

tuberculosis in the city is much more thorough, and in time will be complete, although this last will certainly entail an increase of the dispensary staff.

Secondly, the operation of the Act has shown us the deficiencies of our tuberculosis scheme, and has indicated what will be necessary in the future. The accommodation in Bristol for tuberculous persons is at present—

Frenchay Park.	100 beds for all forms of tuberculosis in children.
Winsley.	58 beds for adults (male and female) suffering from pulmonary tuberculosis in whom there is a reasonable prospect of complete recovery.
Ham Green.	52 beds for similar cases.
Ham Green.	84 beds for acute or advanced pulmonary cases and for non-pulmonary tuberculosis.
Cossham Hospital.	9 beds for non-pulmonary tuberculosis in adults.

In addition, there are at Southmead Hospital 60 tuberculous persons, of whom 11 are bone or joint cases. This scattering of the patients among different institutions, and in some cases mixing them with non-tubercular persons is bad, and should be altered.

The 100 beds at Frenchay for the treatment of all forms of tuberculosis in children is ample for the city's requirements for at least five years: probably much longer if seconded by a considerable increase by the Education Committee of places in open air schools. Should more accommodation be required at Frenchay, additions to the existing sanatorium can be made quite economically.

The existing arrangement for 58 beds at Winsley is satisfactory and there seems to be no good reason to suggest any alteration. There remains to make adequate provision for the remaining 205 cases.

There is another problem in the tuberculosis scheme—the chronic advanced case. Many of our beds at Ham Green and Southmead are occupied by chronic advanced consumptives. They will never be able to do any remunerative work, but while they remain in hospital or sanatorium they are able to be up and about for 6, 8, and 10 hours per day. If sent home they break down very rapidly and have to be re-admitted, having discharged countless millions of tubercle bacilli in the meantime. They require little nursing, less doctoring and a much less costly and elaborate diet and regimen than the average sanatorium patient. Dr. Peters of Ham Green has suggested, and I cordially agree with him, that some at least of these patients might be accommodated in a separate establishment much more simply run. I should very much like to see an experiment in that direction tried. I believe it would enable us to keep some chronic but infectious cases from mixing with their families and the general population at much less expense than our present system—or lack of it—entails.



## Report on Artificial Light Treatment—Year 1930.

### TYPES OF LAMPS USED.

Ajax Tungsten Arc—5 amps.

Hewettic Quartz Mercury Vapour—7 amps.

Hanovia Quartz Lamp—2.5 amps.

Direct Current—250 volts.

### ADULT CASES.

#### *Laryngitis (tubercular).*

Eighteen cases treated. Eight definitely improved as throat specialist reports. One appeared to be quite unchanged. The remaining nine had very advanced pulmonary disease, and although the light treatment appeared to relieve the discomfort of the laryngeal condition, none of them did well and all had to have institutional treatment.

#### *Adenitis (tubercular).*

Five cases treated. One had multiple glandular enlargement originally diagnosed as lymphadenoma. He continues to keep well with light treatment. The remaining four cases had T.B. glands in neck. One who also had T.B. in sputum did not improve and the glands were removed by operation. In two cases the glands disappeared, and in the last case there were discharging sinuses dating from early in 1926. This case shows distinct improvement, but still requires prolonged treatment.

#### *Peritonitis (tubercular).*

Six cases treated (4 f., 2 m.) One male (age 19) improved sufficiently to return to work and keeps well. The other male has fairly extensive disease in the left lung with T.B. present in sputum. Improved considerably and then apparently left the city as he has been completely lost sight of.

Of the four females, three improved sufficiently to return to work. One relapsed after five months at work and will be treated by tapping and oxygen inflation.

#### *Lupus.*

Three cases of true lupus were treated with considerable improvement.

#### *Skin tuberculides.*

Two cases of skin tuberculides treated. One with fairly extensive disease throughout the right lung—completely cured. One with T.B. peritonitis but nothing in lungs, has been improved.

#### *Bones and joints.*

Six cases treated. One case of T.B. spine with sinus in groin from psoas abscess. Sinus completely healed and is able to discontinue the use of spinal brace for several hours daily. One case of

multiple T.B. sinuses of elbow. All sinuses soundly healed but one, which is steadily improving. One case of T.B. great trochanter right femur. Sinus soundly healed. One case of T.B. ankle. Sinuses soundly healed. Now removed from district. One case of multiple T.B. sinuses left iliac crest—soundly healed. One case T.B. wrist—improved.

### *Asthma.*

Four cases of asthma were treated. In two cases in which no signs of tubercle could be found, light treatment seemed to give only temporary relief. In the other 2 cases, who were also definitely tubercular, the results were much better and one patient recovered sufficiently to return to work.

### *Rheumatoid arthritis.*

One case of rheumatoid arthritis in shoulder in a man with chronic fibroid phthisis. Pain decidedly relieved.

### *Pulmonary tuberculosis.*

One case of chronic fibroid phthisis whose general condition remains very poor in spite of prolonged and varied sanatorium treatment, was given a long course of ultra violet light, and was quite unchanged.

### *Retro-pharyngeal abscess.*

One case of retro-pharyngeal abscess, definitely tubercular, was greatly improved.

## CHILDREN.

### *T.B. Peritonitis.*

Seven cases treated ; three showed little change ; three returned to school with complete loss of all physical signs and symptoms. One child was kept away by mother after two exposures—unchanged.

### *Glands in neck.*

Thirteen cases treated. As in previous years it was noticed that cases with discharging sinuses ultimately did much better than the others. In four cases, although the general condition improved greatly, the glands either remained unaltered or increased in size, and removal became necessary. In two cases without sinus formation, the enlarged glands completely disappeared. In six cases with sinus formation the whole condition cleared up and the children returned to school.

### *Lupus.*

Three cases of true lupus in children improved with light treatment.

*Asthma.*

Three cases treated. One case of apparently pure spasmodic asthma with no sign of tubercle showed very little improvement. One case with definitely enlarged hilus shadow and positive tuberculin reaction improved a little but relapsed immediately light treatment was stopped. One case with T.B. in sputum was not relieved by ultra violet light.

## ROUTINE COURSE OF DOSAGE.

General irradiation of mercury vapour four minutes graduating to ten minutes according to the tolerance of patient. For local treatment with tungsten arc two to five minutes : with mercury vapour two to five minutes according to response.

## AVERAGE DURATION OF TREATMENT.

Neck glands	...	...	...	6 months.
Abdomen	...	...	...	6 months.
Bones and joints	...	...	...	6--12 months.
Asthma	...	...	...	18 months.
Larynx	...	...	...	6 months.
Lupus	...	...	...	12—+ months.

## TEMPERATURES.

Temperatures are taken before and after each treatment. No special variation to note.

## RECORD OF WEIGHTS.

With the exception of patients with advanced conditions, the major portion showed a steady gain in weight.

## GENERAL OPINION AS TO BRIGHTNESS AND ALERTNESS.

As in last year, all the adult patients have remarked on their feeling of increased well-being after each treatment, and in the case of children, the mothers report that they are less irritable and that they sleep better.

## EFFECT ON LOCAL LESIONS.

As previously noted, the effect on local lesions is very good, particularly if general irradiation is given in addition.

## OBSERVATIONS ON THE SKIN.

Pigmentation is slight compared with that of natural sunlight. Erythema is easily produced in patients with fair hair, and in the event of a patient of the fair type foregoing a light treatment, it has been found necessary to reduce the exposure at the next attendance in order to counteract their extraordinary susceptibility.

## Return showing the work of the Dispensaries during the year 1930.

DIAGNOSIS	PULMONARY.				NON-PULMONARY.				TOTAL.			
	adults		children		adults		children		adults		children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—NEW CASES (*) examined during the year (excluding contacts) :												
(a) Definitely tuberculous ..	190	201	14	26	10	12	32	26	200	213	46	52
(b) Doubtfully tuberculous ..	..	..	..	..	..	..	..	..	3	4	7	2
(c) Non-tuberculous ..	..	..	..	..	..	..	..	..	86	88	52	47
B.—CONTACTS examined during the year :—												
(a) Definitely tuberculous ..	3	6	7	2	..	..	6	6	3	6	13	8
(b) Doubtfully tuberculous ..	..	..	..	..	..	..	..	..	..	..	1	2
(c) Non-tuberculous ..	..	..	..	..	..	..	..	..	46	72	87	100
C.—CASES written off the Dispensary Register as :—												
(a) Cured ..	10	29	1	..	..	1	..	..	10	30	1	..
(b) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error) ..	..	..	..	..	..	..	..	..	136	168	142	150
D.—NUMBER OF PERSONS on dispensary register on December 31st :—												
(a) Diagnosis completed ..	1007	1030	219	158	95	109	279	223	1102	1139	498	381
(b) Diagnosis not completed ..	..	..	..	..	..	..	..	..	2	2	6	3

1. Number of persons on dispensary register on January 1st ..	3,316	9. Number of patients to whom dental treatment was given, at or in connection with the dispensary ..	3
2. Number of patients transferred from other areas and of "lost sight of" cases returned ..	92	10. Number of consultations with medical practitioners :— (a) At homes of applicants ..	47
3. Number of patients transferred to other areas and cases "lost sight of" ..	† 445	(b) Otherwise ..	1199
4. Died during the year ..	331	11. Number of other visits by tuberculosis officers to homes ..	483
5. Number of observation cases under A (b) and B (b) above in which period of observation exceeded 2 months ..	8	12. Number of visits by nurses or health visitors to homes for dispensary purposes ..	8858
6. Number of attendances at the dispensary (including contacts) ..	14,102	13. Number of (a) Specimens of sputum, etc., examined ..	920
7. Number of attendances of non-pulmonary cases at orthopaedic out-stations for dispensary supervision ..	217	(b) X-ray examinations made in connection with dispensary work ..	1415
8. Number of attendances at general hospitals or other institutions approved for the purpose, of patients for (a) "Light" treatment ..	..	14. Number of insured persons on dispensary register on 31st Dec. ..	1464
(b) Other special forms of treatment ..	..	15. Number of insured persons under domiciliary treatment on the 31st December ..	240
		16. Number of reports received during the year in respect of insured persons : (a) Form G.P. 17 ..	20
		(b) Form G.P. 36 ..	41

\* One case (Adult M.) was placed on dispensary register for treatment, which had previously been written off register as "cured."

† Of this total, 364 can be classified as "not requiring or desiring public medical treatment."



### Residential Institutions.

(A) AVERAGE NUMBER OF BEDS AVAILABLE FOR PATIENTS DURING  
THE YEAR 1930.

	Observa- tion.	Pulmonary tuberculosis.		Non-pulmonary tuberculosis.		Total
		" Sana- torium "	" Hospital "	Disease of bones and joints	Other conditions	
Adult males ...	...	69	38	6	...	113
Adult females ...	...	62	26	4	...	92
Children under 15	...	14	...	25	21	60
TOTAL ...	...	145	64	35	21	265

(B) RETURN SHOWING THE EXTENT OF RESIDENTIAL TREATMENT  
DURING THE YEAR 1930.

			In institutions on Jan. 1.	Admitted during the year.	Discharged during the year.	Died in the insti- tutions.	In institutions on Dec. 31.
Number of patients	Adults	M.	91	242	206	56	71
		F.	75	207	170	31	81
	Children	M.	39	55	50	2	42
		F.	35	47	44	3	35
Number of observation cases	Adults	M.	...	5	5	...	...
		F.	...	1	1	...	...
	Children	M.	...	...	...	...	...
		F.	...	...	...	...	...
TOTAL ... ..			240	557	476	92	229

Return showing the immediate results of treatment of patients \* and of observation of doubtful cases discharged from residential institutions during the year 1930.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of residential treatment in the institution.													
			Under 3 months			3—6 months.			6—12 months.			More than 12 months			Total	
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.		
PULMONARY TUBERCULOSIS	Class T.B. minus.	Quiescent . . . . .	16	9	2	17	23	17	..	5	8	..	..	2	99	
		Improved . . . . .	3	3	3	4	3	6	1	4	4	..	..	..	31	
		No material improvement	2	4	1	..	5	..	1	1	..	..	..	..	14	
		Died in institution . .	4	..	1	..	..	1	..	..	..	..	..	..	6	
	Class T.B. plus group 1.	Quiescent . . . . .	2	1	..	2	3	..	..	1	..	..	..	..	9	
		Improved . . . . .	2	..	..	..	..	..	1	..	..	..	..	..	3	
		No material improvement	..	..	..	..	1	..	..	..	..	..	..	..	1	
		Died in institution . .	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Class T.B. plus group 2.	Quiescent . . . . .	8	2	1	12	8	..	2	2	..	1	..	..	36	
		Improved . . . . .	9	3	..	11	11	..	2	4	..	..	..	..	40	
		No material improvement	1	1	..	..	1	..	1	..	..	..	..	..	4	
		Died in institution . .	..	1	..	..	..	..	..	..	1	..	..	..	2	
	Class T.B. plus group 3.	Quiescent . . . . .	2	1	..	3	5	..	1	2	..	..	..	..	14	
		Improved . . . . .	6	2	..	19	12	..	9	9	..	1	2	..	60	
		No material improvement	21	9	..	13	5	..	3	5	..	5	1	..	62	
		Died in institution . .	30	13	..	7	10	..	8	6	..	5	..	1	80	
NON-PULMONARY TUBERCULOSIS	Bones and joints.	Quiescent or arrested . .	..	1	1	2	5	..	2	2	4	1	..	10	28	
		Improved . . . . .	11	8	2	1	..	..	2	..	..	..	..	1	25	
		No material improvement	1	..	1	..	..	..	1	..	..	..	..	1	4	
		Died in institution . .	1	..	..	..	1	2	..	..	..	..	..	..	4	
	Abdominal	Quiescent or arrested . .	..	..	..	2	1	11	..	..	3	..	..	..	17	
		Improved . . . . .	1	..	..	..	1	1	..	..	..	..	..	..	3	
		No material improvement	..	..	..	..	1	..	..	..	..	..	..	..	1	
		Died in institution . .	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Other organs	Quiescent or arrested . .	..	..	..	..	..	..	..	..	1	..	..	..	1	
		Improved . . . . .	..	..	..	1	..	..	..	..	..	..	..	..	1	
		No material improvement	..	..	..	..	..	..	..	..	..	..	..	..	..	
		Died in institution . .	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Peripheral glands	Quiescent or arrested . .	..	2	1	..	..	7	..	..	2	1	..	1	14	
		Improved . . . . .	..	..	2	..	..	1	..	..	..	..	..	..	3	
		No material improvement	..	..	..	..	..	..	..	..	..	..	..	..	..	
		Died in institution . .	..	..	..	..	..	..	..	..	..	..	..	..	..	
				Under 1 wk.			1-2 weeks.			2-4 weeks.			More than 4 weeks			
Observation for purpose of diagnosis	Tuberculous . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Non-tuberculosis . .	..	..	..	..	..	..	..	..	..	†5	1	..	6		
	Doubtful . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..		

\* It should be borne in mind that the definition of "patient" does not include persons in whom a definite diagnosis of tuberculosis has not been made.

† One case died in institution from carcinoma.—Not T.B.

### Cleansing and disinfection of verminous persons.

Accommodation is provided at the Disinfecting Station, St. Philip's Marsh, for the bathing of persons of both sexes, and children of school age receive attention at the school clinics.

During the year, baths were given to 34 men and 30 women.

#### *Disinfections.*

The numbers of disinfections, etc., during the year were as follows :

Premises disinfected ... ..	4,669
Articles „ ... ..	78,102
Articles destroyed ... ..	1,547

The disinfecting staff consisting of foreman, 5 disinfectors, and 3 vandrivers, work under the general direction of the district sanitary inspectors. The plant at the central disinfecting station comprises two Washington-Lyons steam-jacketed disinfectors, two vertical steam boilers, one Sargent's incinerator, and three 1-ton Ford vans for collection and return of bedding and clothing.

### Rats and Mice (Destruction) Act, 1919.

*Work carried out during 1930 (city only).\**

	Baits		Traps set	Rats destroyed
	laid	taken (approximate number)		
Generally in the city ...	104,303	51,046	1,772	2,547
In public sewers (undertaken by the city engineer's department)	59,815	42,330	—	—
Total ...	164,118	93,376	1,772	2,547

\* Figures relating to rats destroyed on ships, quays, wharves, refuse tips, etc., in the vicinity of Avonmouth, Bristol or Portishead docks are given in the report of the port medical officer of health.

### National Rat Week, 3rd-8th November, 1930.

During rat week, posters were exhibited in the city, handbills distributed, and the co-operation of the local press was solicited ; and these efforts to stimulate public interest in the destruction of rats resulted in numerous enquiries being received regarding the best methods of destroying the vermin.

A tip in the city was treated in the presence of representatives of the local press. A Clayton's Gassing Machine which had been recently purchased by the Health Committee was used for the purpose, and a large number of rats were killed.

During the week the city engineer caused 18,750 baits to be laid in the city sewers, approximately 11,740 of which were taken.

### PREVENTION OF BLINDNESS.

Report by Mr. J. G. WATSON.

By section 2 of the Blind Persons' Act, 1920, it was made the duty of the Council to make arrangements for promoting the welfare of blind persons ordinarily resident within the area. On the 26th

July, 1921, the Council adopted a scheme, prepared by the committee appointed on 9th November, 1920, to carry out the duties of the Council, which was approved by the Minister of Health and came into operation on the 1st October, 1921.

Section 66 of the Public Health Act, 1925, has been delegated by the Council to this committee which has reported that measures for the prevention of blindness and in particular for the treatment of persons suffering from any disease of the eye are quite efficiently carried out by the Health Committee, the Education Committee and the Bristol Eye Hospital.

On the 30th July, 1929, the Council made an administrative scheme under the Local Government Act, 1929, clause 2 of which declared that all assistance to necessitous persons as regards the provision of domiciliary assistance to blind persons shall be provided exclusively by virtue of the Blind Persons Act, 1920, and not by way of poor relief. This declaration was subsequently amended to allow the Council to deal with all necessitous blind persons including unemployable and other destitute blind persons.

Under the scheme made by the Minister of Health under section 102 (1) of the Local Government Act, 1929, for the payment of contributions to voluntary associations providing services for the welfare of blind persons, the Council have delegated the following services to the Bristol Royal Blind Asylum workshops and Royal School for the Blind in accordance with the provisions of the Blind Persons Act, 1920, viz. :—

1. Workshop employment for suitable blind persons in workshops or elsewhere.
2. Home employment in a homeworkers' scheme.
3. Augmentation of earnings of workers employed in a workshop for the blind under homeworkers' scheme or elsewhere.  
(Necessitous blind over 16 years, such assistance as may be necessary to ensure an income of 16/6 per week, and in the case of a man and wife who are both blind a joint income of 25/- per week.)
4. Provision of hostels for suitable employed blind persons where necessary.
5. Home teaching and visiting of the blind.
6. Consideration of the cases of unemployable or other destitute blind persons in need of institutional or other non-domiciliary assistance and to provide such assistance as may be necessary.
7. Registration and certification in accordance with the Blind Persons Act, 1920.
8. Provision of accommodation in homes for suitable adult blind persons incapable of work.
9. To promote the general social welfare of the blind.

The institution mentioned above is required in each year to appoint to their committee as associated members four persons nominated by the Council, including two members of the Bristol Education Committee and one blind person ; also to appoint one of the associated members to serve upon the committee dealing with grants of financial assistance. The institution presents a report of its work annually to the Council.



The Council acting as the Local Education Authority is responsible for :—

- (a) Provision where necessary for children under 5 years of age at the residential school for the blind or other approved institution.
- (b) Education and training of children up to the age of 16 ; technical training in trades or handicrafts of suitable blind persons over 16 years ; secondary education or training in suitable professions of blind persons who have special aptitude therefor ; maintenance during period of training by payment of fees at approved institutions.

These proposals form part of the Local Education Authority's scheme under the Education Act, 1918.

The present scheme for the welfare of the blind came into operation on the 1st April, 1930.

As the detailed supervision of voluntary associations previously exercised by the Minister of Health through his inspectors has now ceased, it is the duty of the Council to satisfy themselves as to the efficiency of the services provided by associations to which they are required to contribute under the scheme. Representation of the Council upon the Committee of the Bristol Royal Blind Asylum is provided under the scheme, but the Minister suggested that an officer should be appointed who would be responsible for inspecting the services of all the voluntary organisations to whom the Council pay grant. In accordance with this recommendation, the Council on the 10th November, 1930, appointed the medical officer of health to this position, with a view to co-ordinating the work of the Blind Persons Act Committee with the other work of the Council relating to the prevention of blindness and the treatment of school children with defective vision.

The number of blind persons ordinarily resident in the city and registered at 31st March, 1931, under the Blind Persons Act, 1920, with the age incidence of blindness, employment, occupations, physical and mental condition is shown in the following tables :—

*Registration.*

Age period	M.	F.	T.
0— 5	1	1	2
5—16	14	7	21
16—21	5	7	12
21—30	9	11	20
30—40	36	17	53
40—50	39	30	69
50—60	55	56	111
60—70	76	97	173
70—	73	101	174
Total	308	327	635

*Age incidence of blindness.*

Age period	M.	F.	T.
0— 1	35	51	86
1— 5	15	12	27
5—10	10	14	24
10—20	24	23	47
20—30	30	20	50
30—40	27	16	43
40—50	34	45	79
50—60	64	54	118
60—70	51	61	112
70—	14	27	41
Unknown	—	—	8

*(a) Employment—age period 16 and upwards.*

	Employed	Trained but unemployed	Under training	No training but trainable	Unemployable	Total
M. ...	89	1	9	—	194	293
F. ...	36	—	9	—	274	319
Total	125	1	18	—	468	612

*(b) Occupations of employed.*

Agents, collectors, etc.	7	Labourers ... ..	—
Basket and cane workers	29	Massage ... ..	4
Boot repairers ... ..	1	Mat-makers ... ..	15
Brush makers ... ..	2	Mattress-makers ...	—
Carpenters ... ..	—	Musicians and music teachers ... ..	3
Clergymen ... ..	—	Net makers ... ..	—
Clerks, typists ... ..	2	Newsvendors ... ..	1
Telephone operators ...	1	Poultry farmers ...	—
Dealers (tea agents, shop keepers, etc.) ...	6	School masters ...	4
Domestic servants ...	4	Seamstresses and upholsterers ... ..	—
Farmers ... ..	—	Straw and string bag makers ... ..	—
Hawkers ... ..	4	Turners ... ..	9
Home teachers ... ..	4	Miscellaneous ... ..	10
Knitters ... ..	19	Total ... ..	125

*Physically and mentally defective.*

	(a) mentally defective	(b) physically defective	(c) Deaf	Combina- tions of (a) (b) & (c)	Total
M. ...	19	19	11	3	52
F. ...	24	20	26	7	77
Total	43	39	37	10	129

*School age period (5-16) according to mental or physical defects.*

		Normal	(a) Mentally defective	(b) Physically defective	(c) Deaf	Combina- tions of (a) (b) (c)	Total in age period	Total defectives in age period	Percentage of defectives in Total
AT SCHOOL.	M.	13	...	...	...	...	13	...	...
	F.	5	1	...	...	...	6	1	...
	Total	18	1	...	...	...	19	1	5.3
NOT AT SCHOOL.	M.	...	1	...	...	...	1	1	...
	F.	...	1	...	...	...	1	1	...
	Total	...	2	...	...	...	2	2	100
	Grand Total	18	3	...	...	...	21	3	14.2

*Blind population.*

At 31st March	Rate per 1,000 population	Ratio
1931	1.62	1 in 615
1929	1.52	1 in 656
1927	1.53	1 in 653
1925	1.59	1 in 628
1923	1.63	1 in 610

## VIII.—CITY HOSPITALS, SANATORIA, etc.

### HAM GREEN HOSPITAL AND SANATORIUM.

Report by B. A. I. PETERS, M.D. Cantab.,  
Resident Medical Superintendent.

#### Staff.

Resident medical superintendent	B. A. I. Peters, B.A., M.D., D.P.H.
Assistant resident medical officers	C. A. Burges, M.B., Ch.B.
" " " " " " " "	B. J. Boulton, M.B., Ch.B.
" " " " " " " "	C. Short, M.B., Ch.B., D.P.H.
Matron	Miss K. M. Baldwin.

Assistant matrons, 3; sister tutor, 1; night superintendents, 2; ward sisters, 14; staff nurses, 6; probationers, 64; dispenser, 1; clerk, 1; domestic staff, 81; male servants, including engineers, orderlies, &c., 17.

#### Ham Green Hospital.

*Table of admissions and discharges, 1930.*

Disease	Remaining in Hospital at end of 1929	Admissions as notified	Recovered	Died	Mortality Case rate per cent.	Remaining in Hospital at end of 1930
Scarlet fever ...	17	448	449	1	.2	21
Diphtheria ...	215	1,374	1,299	36	2.7	133
Enteric fever ...	—	12	10	—	—	—
Measles ...	—	187	131	14	9.6	45
Chicken-pox ...	—	16	16	—	—	—
Erysipelas ...	—	35	28	4	12.5	3
Whooping cough ...	—	2	2	—	—	—
Mixed infections and other diseases and observation cases	8	28	142	6	4	2
TOTALS ...	240	2,102	2,077	61	—	204

#### *Scarlet Fever.*

This has again been a mild disease, only one death occurring in the series of 450 cases, and that in a young child from an associated broncho-pneumonia. The return case rate was 1.7 per cent.

#### *Diphtheria.*

An epidemic of this disease, which started in the previous autumn, reached its highest point in February. It was decidedly of a severe type and tended to increase in virulence as it became more prevalent.

The number of cases admitted—1,374—was the largest in the history of this hospital. The death rate on the completed cases was only 2.7 per cent, a record low mortality. A new form of treatment, which had been worked out by your staff, was applied to all admissions after January.



Thirty-six cases died in all, of which seven died before this treatment was fully applied. The death rate on the remaining cases was only 2.3 per cent. This compares with a rate of 5.8 in the preceding year.

Application of the theory on which this treatment is based has apparently also almost entirely eliminated the kidney complications after scarlet fever. The application of the theory and its results have been fully published in the *Lancet* (Sept. 30th, 1930) and the *Medical Officer* (Jan. 24th, 1931).

### *Measles.*

One-hundred-and-eighty-seven cases of measles, complicated with pneumonia, were admitted, of which 14 died.

As most of the cases were young children with serious complications from poor houses, hospital treatment certainly saved a good many lives. During epidemic times the disease is liable to be brought into other wards through cases being admitted there whilst incubating measles. The use of convalescent serum in doses of 2 c.c.'s was very successful in preventing the development of the disease in other contacts. The difficulty is to obtain sufficient, as it is only practicable to obtain it from a large child or an adult, and measles is mostly a disease of very young children.

In considering the whole measles admissions extending into the new year, a curious point arose which may be significant. 167 cases were treated in a large ward of 26 beds, of these 23 died, just under 14 per cent, an identical figure with the last epidemic in which the cases were treated in similar large wards. Another 150 cases were treated in an observation ward containing four cubicles with four beds in each. Of these only six died (4 per cent). The admissions into each section were quite unselected. The difference in the two series of results is greater than is probable from a mere statistical variation. The difference is possibly due to two factors. The actual cause of death in measles is due to a secondary infection causing a form of septic broncho-pneumonia. This secondary infection is probably different in different cases (compare influenzal broncho-pneumonia where a great variety of secondary organisms can be recovered from the lungs).

Although mostly all these cases had chest complications on admission, they may have picked up other organisms from each other, although this ward was not overcrowded (1400 c. ft. air space and 96 sq. ft. of floor space per bed).

The other factor is possibly the difficulty for the dangerously ill patients to obtain sufficient sleep which is so vital in pneumonia. Measles children are always intensely miserable and being mostly under four are given to crying most of the time they are awake. When one starts the others take up the chorus, so that there is hardly one hour in the twenty-four when some of the children are not crying. This obviously prevents the bad cases from obtaining sufficient rest. The two factors noted operate in smaller degree when there are only four patients in each room. If this is confirmed it would appear advisable to construct wards intended for measles in cubicles of not more than four beds.

If free open air wards could be used, the first factor would be eliminated, but feeble children with measles pneumonia do not thrive under too open-air conditions in severe weather.

A trial was made of a drug, *amidopyrin*, for which great benefit has been claimed in this disease. In our opinion the effects in such cases as received it was harmful rather than beneficial.

#### *Cross infection.*

Fourteen cases contracted a second disease after admission, namely, four scarlet fever, two chicken-pox, eight measles, a cross infection rate of 0.7 per cent. The original diagnosis was considered to be in error in 113 cases (5 per cent.)

#### *Erysipelas.*

Thirty-five cases were admitted, of which four died. The use of antitoxic anti-streptococcal serum was used for this disease, combined with either *S.U.P.* 468, *Metarsenobillon*, or *Maganese Butyrate*. These combinations (of which the last appears the most effective) were very effective in most cases causing a rapid termination of the attack, but in cases in which the disease had been present for several days the results were not so good. Research is still being made on the treatment of this disease.

#### *Aural disease.*

Your consulting aural surgeon saw every case with ear complications and considered it necessary to operate on 54 cases. The result was that very few patients left hospital with any ear discharge. Any such cases are reported to the school medical officer, who follows them up on leaving hospital. Any other disability found is similarly reported.

#### *Research.*

In institutions such as this, where large numbers of cases of a few diseases are collected, the clinical material for research is unequalled.

It is regrettable that in the public hospitals facilities for carrying this out are very limited at present. A team consisting of a clinician, pathologist, bio-chemist, and physiologist working in a fever hospital would have excellent opportunities of solving many of the problems of the reactions of the body to infections, and making discoveries which might have vast repercussions on the whole outlook of medicine.

This is an excellent opportunity for a philanthropic millionaire to make good use of his superfluity of wealth by building and endowing such a laboratory which would be unique in its scope and opportunities. There is ample room on the estate.

The Schick and Dick methods for protection of the staff were carried out as usual. The results are tabulated. One nurse contracted diphtheria before she had been tested or immunised. Another nurse who had been originally Dick positive and had become negative by inoculation contracted scarlet fever eighteen months subsequent to inoculation.

*Schick tests.*

Year	Tested	Un-tested	Immunised			Total attacks of diphtheria		
			Doses				Loss of service (days)	No. of cases admitted
			2	3	4			
1922	175	—	19	29	—	6	264	751
1923	37	25	23	25	—	6	233	671
1924	—	59	—	—	59	—	—	862
1925	—	76	—	—	76	2	110	1,045
1926	—	70	—	—	70	1	27	658
1927	—	64	—	—	64	1	42	595
1928	—	64	—	—	64	1	38	574
1929	84	—	—	44	—	2	100	1,047
1930	78	—	—	31	—	—	—	1,374

*Dick tests.*

Year	Tested	Pos.	Neg.	Immunised	Cases of S.F. amongst staff.		
					Immunised *	Not immunised*	
						+	—
1926-7	85	31	54	28	1	2	
1928	66	21	45	19	1	1	2
1929	86	15	71	15	1		
1930	76	13	63	10	1		

\* The + and — signs indicate result of original test.

**NOVERS HILL HOSPITAL.***Staff.*

Visiting medical officer ... B. A. I. Peters, B.A., M.D., D.P.H.

Home sister ... Mrs. E. E. Lane

Nursing superintendent ... Miss E. R. Wilcox

Ward sister, 1; staff nurse, 1; probationers, 9; domestic staff, 12; male servants, including engineer, lodge-keeper, etc., 6.

Six hundred and forty seven cases completed their convalescence in Novers Hill Hospital which was open throughout the year for such cases.

**HAM GREEN SANATORIUM.***Table of admissions and discharges, 1930.*

Remaining in sanatorium at end of 1929	Admitted	Discharged	Died	Remaining in sanatorium at end of 1930
121	268	196	85	108







# SOUTHMEAD HOSPITAL.

Report by P. PHILLIPS, M.Sc., M.B., Ch.B.,  
Resident Medical Superintendent.

## Staff.

Resident medical superintendent	P. Phillips, M.Sc., M.B., Ch.B.
Assistant resident medical officers	{ R. W. Savage, M.R.C.S., L.R.C.P. W. Gapper, B.Sc., M.B., Ch.B.
Visiting physician	... J. A. Nixon, C.M.G., M.D., F.R.C.P., Lond.
„ surgeon	... H. G. Kyle, M.A., M.D.
„ consultant children's diseases	... O. C. M. Davis, M.D.
„ pathologist	... A. D. Fraser, M.B., Ch.B., D.P.H.
„ dental surgeon	... G. F. Fawn, L.D.S., B.D.S.

## Orthopaedic clinic—

Surgeon	... E. W. Hey Groves, M.S., M.D., F.R.C.S., Eng.
„	... H. Chitty, M.S., F.R.C.S., Eng.
Assistant surgeon	... K. H. Pridie, M.B., B.S., F.R.C.S., Eng.
Steward	... Mr. T. Jones
Matron	... Miss M. C. Price

Assistant matron, 1; sister tutor, 1; night sisters, 2; theatre sister, 1; home sister, 1; maternity sister, 1; ward sisters, 12; staff nurses, 15; probationers, 82; assistant steward, 1; clerks, 2; M.D. Block, superintendents and head attendant, 3; school teacher, 1; masseuses, 2; dispenser, 1; domestic staff, 62; male servants, including storekeeper, engineer, etc., 35.

In a first report on the work and progress of Southmead Hospital during the past year it seems necessary to preface any remarks with a statement as to its work and function during the period before its transfer to the Health Committee.

In 1914, the buildings, which were just completed, were at once handed over to the army authorities upon the outbreak of war. As part of the 2nd Southern General Hospital, 37,397 cases were treated here, and it was not until October, 1920, that the hospital reverted to the use of the civilian population.

Hence in October, 1930, a period of ten years had elapsed from the time when it again became usable for the sick poor of the city.

The numbers treated in the various years were as follows :

Year	Total In-patients.
1921	1,703
1922	1,882
1923	2,151
1924	2,447
1925	2,863
1926	2,769
1927	2,821
1928	2,850
1929	3,258
1930	3,811

From these figures it is noted that a steady march of progress in numbers has taken place, so that now we are admitting more than twice as many cases as in 1922.

This has been possible by some change in the character of the work, for whereas originally a large number were chronic and incurable cases, now we are performing two very important functions:

- (1) We are doing every part of the work of a large general hospital.
- (2) We are still doing special work for the care of chronic cases, which are often refused by the voluntary hospitals, because of the pressure of more acute cases.

The situation of the hospital with its extensive grounds helps very materially in the cure of patients, for as soon as they are well enough, convalescent cases are allowed full access to these grounds, for the purpose of recreation and the re-establishment of health.

Early in 1930 an extension to the nurses' home was completed. This makes accommodation for 35 nurses and meets a most urgent need.

The beds available during 1930 were classified as follows :—

Medical	...	...	...	156
Surgical	...	...	...	72
Children	...	...	...	52
Chronic sick	...	...	...	170
Tuberculosis	...	...	...	68
Isolation	...	...	...	34
Maternity	...	...	...	20
Mental defectives	...	...	...	100
Total				672

The average number of beds occupied daily was 632 :

- (a) Highest (on May 27th, 1930) ... 692\*
- (b) Lowest (on August 3rd, 1930) ... 561

\* Additional beds to meet extra demand.

*Statistics relating to patients for years 1930 and 1929.*

In-Patients.	1930	1929	Increase	Decrease
In wards on 1st January ...	627	584	43	...
Admitted since :				
Medical ... ..	1,595	1,414	181	...
Surgical ... ..	848	671	177	...
Ophthalmic ... ..	35	21	14	...
Gynaecological ... ..	55	43	12	...
Maternity ... ..	408	253	155	...
Ear, Nose, Throat ... ..	66	103	—	37
Other cases ... ..	177	169	8	...
Total number of in-patients	3,811	3,258	590	37
Net Increase — 553.				

	1930	1929	Increase	Decrease
Average number beds occupied daily ... ..	632	620	12	—
Ditto excluding babies born in wards ... ..	614	604	10	...
Average stay-days ... ..	25	28	...	3
Number of operations ...	233	196	37	...
Average cost per bed ...	35/0 $\frac{1}{4}$	36/2	...	1/1 $\frac{3}{4}$

*Massage department.*

In-patients.	1930	1929	Increase	Decrease
Total massage treatments ...	6,937	6,582	355	...
Total electrical treatments...	592	237	355	...
Radiant heat treatments ...	84	20	64	...
Total exercises, S.R.E. ...	98	43	55	...
Total treatments ... ..	7,711	6,882	829	...

I regret to report the death of Mr. Ambrose, a blind masseur, who had done excellent work in the hospital for the past ten years. Temporary help has been engaged and the staffing and development of this department are at present under consideration.

*X-ray department.*

The work in this department is steadily increasing. Until a new source of supply for electricity is available it is impossible to improve the existing plant. A few cases have been treated with superficial X-ray therapy, but no apparatus is available for deep X-ray therapy.

	1930	1929	Increase
Films used ... ..	40 dozen	38 dozen	2 doz.
Cases screened ... ..	150	120	30

*Diathermy.*

	1930	1929	Increase
Cases treated ...	46	39	7

*Radium.*

One case of carcinoma of larynx was most successfully treated in 1929, and the patient is still alive with no sign of recurrence. In this case the radium was loaned from the General Hospital. Otherwise, there has been no demand for this treatment, the explanation being that all suitable cases have received the chance of treatment in one of the voluntary hospitals.

Passing to a review of the various types of cases, we find from the figures in statistics relating to patients that there are increases in



all sections except ear, nose and throat. The decrease in this department is due to fewer cases of chronic ear discharge being sent in for treatment.

#### *Medical section.*

Early in 1930 small epidemics of whooping cough, chicken-pox and german measles brought an increased number of young children to hospital. There were a large number of adults admitted with varying forms of heart disease, lesions of the nervous system, respiratory diseases and skin diseases. About thirty chronic cases of post-encephalitis lethargica were also dealt with. I regret to report that in spite of many different forms of treatment these cases showing sequelae from original attacks seven or ten years ago, still show no signs of permanent improvement.

Male tuberculosis beds were always fully occupied, but on the female side pressure on these beds has not been so great.

The figures show an increase of 181 cases treated as compared with 1929.

#### *Surgical section.*

This department showed an increase of 177 cases as compared with 1929. Of 848 cases treated, 233 underwent operations under general anaesthetics, and it is gratifying to record no case of death under anaesthetic.

Many of the remaining cases were fractures and incurable forms of cancer. Radium has not been employed to any extent because the whole of these incurable cases had received such treatment where practicable prior to admission here. The results of treatment by injection of such substances as lead-selenium, colloid, selenium, etc., have not proved very satisfactory.

In addition, a large number of minor surgical operations were performed, and many minor casualties occurring near Southmead were treated. In fact, with the development of housing sites in this neighbourhood, the time is not far distant when some form of out-patient department will be needed.

#### *Ophthalmic section.*

Few eye cases were treated, but these show some increase from previous years. The majority were in children, *e.g.*, corneal ulcers, conjunctivitis and blepharitis.

#### *Gynaecological section.*

This department, though still small, shows an increase in the number of cases compared with 1929.

Of the 55 cases treated 27 were incomplete abortions, all the patients making good recoveries.

#### *Maternity department.*

This section shows a very marked increase and the record number of 408 patients were treated, an increase of 155 cases on the previous year.

The ante-natal clinic was well attended, in fact, the session had to be increased by one hour to deal with all the patients presenting themselves.

The increase in the number of cases is well shown in the following table :—

Year	Number of cases.
1921	61
1922	62
1923	77
1924	81
1925	78
1926	111
1927	131
1928	127
1929	253
1930	408

The first marked increase occurred in 1926 following the establishment of the ante-natal clinic on the 1st January that year.

The still greater increase coincides with the transfer of the hospital to the Health Committee. I should like to point out that as the work increases a new maternity department becomes more and more desirable. The wards at present in use were never designed for maternity work and the labour ward is really inadequate for present needs. I am glad to record that with this large number of cases there were no maternal deaths.

Details are given below concerning still-births, instrumental deliveries, etc.

Total number of cases	...	...	...	...	...	408
Number of still-births	...	...	...	...	...	12
(including 1 anencephalic).						
Number of cases ophthalmia neonatorum	...	...	...	...	...	nil
„ „ (inflammation of eyes)	...	...	...	...	...	nil
„ maternal deaths	...	...	...	...	...	nil
Forceps delivery	...	...	...	...	...	41
Breech „	...	...	...	...	...	17
Puerperal sepsis	...	...	...	...	...	nil
Puerperal pyrexia	...	...	...	...	...	1

Anaesthetics were not used extensively in normal labours, but a certain number were given apart from instrumental interference, as occasion demanded.

Finally, in this department, classes were given to nurses wishing to qualify for the C.M.B. examination, and eleven nurses were successful. There were no failures.

#### *Ear, nose and throat section.*

There was a slight decrease in the number of cases in this department but actually more operations were performed than in 1929. As mentioned previously this was because fewer cases with chronic ear discharge presented themselves for treatment.

#### *Dental department.*

A dental session has been carried on throughout the year on Thursday mornings. The consultant dentist attended, and I consider this work most valuable, for a very large number of patients admitted

with other diseases are in urgent need of dental care. It is useless to attempt treatment of obscure medical disorders until obvious defects of this character have been remedied. Wherever possible new dentures have been provided, either by the committee or through dental aid societies.

### FRENCHAY PARK SANATORIUM.

#### Staff.

Resident medical superintendent K. H. Pridie, M.B., B.S., F.R.C.S.  
 Visiting physician ... .. C. J. Campbell Faill, F.R.C.P., Ed.  
 Visiting surgeon ... .. H. Chitty, M.S., F.R.C.S., Eng.  
 Matron ... .. Miss L. Allen.

Ward sister, 1; staff nurse, 1; probationers, 4; schoolmistress, 1; domestic staff, 6; engineer, 1.

The extensions to the institution were in progress during 1930, for the completion of a children's sanatorium to accommodate 100 patients. It was decided to bring this institution into the orthopaedic scheme for the city. This is dealt with in the introduction.

During the year 74 children (34 males, 40 females) were admitted and were diagnosed on admission as follows :—

Pulmonary tuberculosis	...	...	54
Glandular tuberculosis	...	...	12
Tuberculosis of peritoneum	...	...	8
Total			74

73 cases (34 males, 39 females) were discharged during the year as follows :—

Class	Condition on discharge	Male	Female	Total
Pulmonary tuberculosis	Quiescent ... ..	14	15	29
	Improved ... ..	4	6	10
	No material improvement	—	1	1
	Died in institution ...	1	2	3
Glandular tuberculosis	Quiescent ... ..	5	6	11
	Improved ... ..	—	3	3
	No material improvement	—	—	—
	Died in institution ...	—	—	—
Bones and joints	Quiescent ... ..	1	—	1
	Improved ... ..	—	—	—
	No material improvement	—	—	—
	Died in institution ...	—	—	—
Peritoneum	Quiescent ... ..	7	6	13
	Improved ... ..	1	—	1
	No material improvement	—	—	—
	Died in institution ...	—	—	—
Other organs	Quiescent ... ..	1	—	1
	Improved ... ..	—	—	—
	No material improvement	—	—	—
	Died in institution ...	—	—	—
Total ...		34	39	73

**STAPLETON INSTITUTION.**

(Administered by the Public Assistance Committee).

Report by S. DATTA, M.B., Ch.B.,  
Resident Medical Officer.*Patients.*

The following are approximately the number of patients at this institution :—

Males	Females	Total
392	448	840

including :—

320	patients certified under	Lunacy Acts.
357	„ „ „	Mental Deficiency Acts.
163	„	uncertified.

*Beds.*

Male and female sick blocks (C and D blocks) contain 126 sick beds and 89 beds for infirm and feeble cases. Total 215 beds.

*Pathological examinations.*

Routine pathological and bacteriological examinations are made by Dr. A. D. Fraser, the pathologist to the institution. On account of frequent prevalence of intestinal infections, bacteriological examinations of faeces are those most frequently required.

*Staff.*

Three registered general nurses are in charge of the sick blocks ; the remaining staff consist of untrained female attendants.

A whole-time qualified dispenser is employed.

A dental surgeon attends on two mornings per week.

A trained masseuse attends 3 days a week. Under her care some 16 cases of post-encephalitic parkinsonism are able to live a contented and fairly healthy life.

*Training and employment of patients.*

	Male	Female	Total
Total employed ...	208	258	466
Not employed ...	184	190	374
Total in residence ...	392	448	840

From the above it will be seen that out of the total of 840 patients, 374 are unsuitable for any useful employment. A large number of those who are employed are only capable of performing very low grade tasks. 466 patients are employed at such varied occupations as farm work and gardening, domestic, laundry, sewing, tailoring, shoemaking, brushmaking and matmaking, garage, bakery, painting and handicrafts.



*Admissions and discharges.*

Many are admitted as observation cases without lunacy orders, and subsequently discharged, detained or transferred to the mental hospital. Those discharged (to the care of relatives) are mostly cases of mild psychosis and psycho-neuroses, and recover from their temporary break-downs. Although the institution is not equipped for mental treatment, on account of the aversion of Justices to make orders of removal to the mental hospital, a number of cases of "mild" and "border-land" types have perforce to be treated.

*Deaths.*

There were 133 deaths during the year ending 31st March, 1931. The causes were as follows :—

Hypostatic congestion of the lungs and senility or myocardial degeneration and senility	...	60% approx.	
Cerebral vascular degeneration	...	16%	„
Acute chest conditions	...	14%	„
Miscellaneous causes	...	10%	„

*Infectious outbreaks during the year.*

An epidemic of bacillary dysentery due to the bacillus of sonne, occurred in July, 1930. 30 female and 19 male patients were attacked. Three aged female patients died of the disease.

**EASTVILLE INSTITUTION.**

(Administered by the Public Assistance Committee).

Report by J. A. L. ROBERTS, M.B., B.S.,  
Medical Officer.

*Accommodation.*

The following classes are maintained at the institution :—

There are 205 female and 167 male beds for aged and infirm cases. Four wards, containing 102 female beds, and three wards containing 54 male beds, are reserved for bedridden cases.

The average age of bedridden patients at present in the institution is : male, 68 years ; female, 79 years. Approximately 50 per cent. of these cases are bedridden purely on account of age, the remainder being further incapacitated by chronic diseases, such as rheumatoid arthritis and paralyses of various types.

The remaining beds for aged and infirm are occupied by patients who are so incapacitated as to be unable to care for themselves, many being unable even to dress themselves. These patients require everything done for them.

The medical work in these departments is concerned almost solely with the last aim of medicine, the alleviation of suffering, and such success as is attained, is due to the patient and untiring care of the attendants, to which the extreme rarity with which one sees a bed sore, is ample tribute. Conditions are constantly arising

amongst these cases which require hospital care, so that there is naturally a large interchange of cases between this institution and the hospital at Southmead.

The cases referred to in this group are patients who would, but for inadequate accommodation at home, absence of relatives to care for them, or their own or their relatives inability to pay for attendance, be cared for in their own homes.

The inmates of the remaining portion of the institution are provided with medical treatment such as they would obtain outside. They attend at the surgery whenever they wish and are given such medicine or dressings as they need.

Treatment in the sick wards is given only for the mildest illness requiring rest in bed. All the more serious illnesses are dealt with at Southmead Hospital.

#### *Casuals.*

All casuals complaining of illness are seen and suitable treatment given, either by medicine or dressing or by admission to the institution here, or the hospital at Southmead. Any casual whom the attendant considers ill is brought to my notice, even if the patient himself does not apply.

In accordance with the Ministry of Health's instructions, all casuals in the casual ward are medically examined on a particular day in each month. We have admitted during the past year 104 cases to the institution on medical grounds. Of these, 72 cases have been admitted on account of skin trouble, including sore feet, vermin rash, and scabies. A ward is provided for the housing of venereal cases. These, however, receive their treatment at the venereal disease clinic in the city, being merely housed here during the period of treatment. Cases who are unfit to go backwards and forwards are treated as indoor patients at the clinic. 10 cases of this type have been dealt with during the past year.

#### *Deaths.*

There have been 134 deaths in the institution during the past year, the average age at death being 78 years. Of these, 58 were due entirely to old age, the remainder having also some illness as contributory or main cause. In the following table the numbers in the institution at the last census in April, 1931 are classified according to age.

Under 40	40-60	60-70	70-80	80-90	over 90	Total
55	207	250	188	131	15	846

The general health of the inmates is good and we have been free from any disease of an infectious nature.

The control of the institution is in the very capable hands of the master and matron whose willing co-operation and help are an invaluable asset to the medical officer.

## IX.—VENEREAL DISEASES.

### *Treatment centre.*

There is one treatment centre for Bristol, viz., at the Bristol Royal Infirmary. This clinic was opened on the 11th July, 1927, when Dr. S. Hardy Kingston was appointed to take charge. Out-patient treatment is available between 8 a.m. and 10 p.m., every day except Sunday, when urgent cases are seen between 10 a.m. and noon. Accommodation is provided for 12 female and 6 male in-patients.

The treatment centre is conducted in accordance with the principles set forth in the memorandum appended to the Ministry's circular of July 13th, 1916.

Tables in this section give full details of the cases treated at the clinic during 1930.

### *Facilities for private practitioners.*

#### Diagnosis :—

Outfits for the collection of material for pathological examination are supplied free of charge to medical practitioners on request to the health department.

713 specimens were submitted by private practitioners for examination by the pathologist (Professor Walker Hall at the university laboratory). A report was furnished direct to each practitioner concerned.

#### Treatment :—

24 medical practitioners in the city are recognised for the purpose of obtaining free of charge from the Corporation approved substitutes for salvarsan for the treatment of syphilis.

### *Facilities provided by the Public Assistance Committee.*

Five beds for male cases are provided at the Eastville Institution. Seven cases were admitted during the year, but their entire treatment was carried out in the out-patient department of the Health Committee's clinics. All female cases under the care of the Public Assistance Committee are transferred for treatment to the London lock hospital and payment is by actual occupations. No cases were sent during 1930.

### *Port facilities.*

The port of Bristol comprises three widely scattered docks :

Bristol docks—in the city itself ;

Avonmouth docks—6 miles distant—accessible by road and rail ;

Portishead docks—12 miles distant—accessible by road and rail.

Notices in handbill form are posted through the docks advising the provision of free treatment for all, and giving the times of the venereal disease clinics at the Bristol Royal Infirmary.

Seafaring men who attend the clinics are given continuation books and are also given a list of the clinics available at other ports at home and abroad.

*Propaganda work.*

A panel of recognised lecturers is kept by the medical officer of health who arranges for lecturers to attend when requested by interested bodies to do so.

35 meetings were addressed during the year.

**Venereal Disease Clinic.**

Report by S. HARDY KINGSTON, M.B., Ch.B.,  
Medical Director.

*Staff.*

Medical director	...	...	S. Hardy Kingston, M.B., Ch.B., D.P.H.
Assistant medical officers	{		R. S. Statham, O.B.E., M.D., Ch.M.
			R. C. Clarke, O.B.E., M.B., Ch.B.
			C. E. K. Herapath, M.C., M.D.
			W. A. Jackman, M.B., Ch.B., F.R.C.S. Ed.
Sister, 1 ; nurses, 4 ; domestic staff, 3 ; orderlies, 2.			

The department for venereal diseases has now completed its third year's work, as a whole-time clinic, and a survey of the work carried out shows some interesting progress.

The total number of patients under treatment was less than in the previous twelve months, but the number of new patients showed a slight increase. The capacity of the clinic to deal with the gradual increase in numbers has proved ample except during a few evenings when its capacity has been fully extended.

The work of the staff has been very satisfactory.

*Number of new patients.*

The number of new patients for the year was 1,177. This shows an increase of 10 on the previous year. The number of non-venereal cases is due chiefly to the system of examination whenever possible in any case of venereal disease of the members of the family, a large proportion of whom are found to be free from venereal disease.

New patients are as follows :—syphilis, 289 ; soft chancre, 8 ; gonorrhoea, 646 ; non-venereal, 234.

*Number of patients.*

The total number of patients treated during the year was 3,409, being a decrease of 380 on the previous year.

*Attendances.*

The total of attendances for the year was 57,157, an increase of 7,143 on the previous year's working. This is probably due to careful instruction by the staff.

*Treatment and results.*

The number of patients under treatment for venereal disease at the end of the period under review was 2,481. The numbers were as follows—syphilis, 1,334 ; soft chancre, 8 ; gonorrhoea, 1,138. The number of intravenous injections of salvarsan substitute was 4,257.

*In-patients.*

During the twelve months the number of cases admitted were : women, 57 ; men, 78.



## Venereal Disease Clinic.

*Statement showing the services rendered at the treatment centre  
during the year 1930.*

	Syphilis		Soft Chancre		Gonorrhoea		Conditions other than Venereal		TOTAL	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Number of cases which—										
(a) at the beginning of the year under report were under treatment or observation for .. .. .	945	360	2	1	936	163	..	..	1,883	524
(b) had been marked off in a previous year as having ceased to attend or as transferred to other centres, and which returned to the treatment centre during the year under report suffering from the same infection .. ..	15	7	..	..	32	5	..	..	47	12
TOTAL—Items (a) and (b) ..	960	367	2	1	968	168	..	..	1,930	536
(c) Number of cases dealt with at the treatment centre during the year for the first time with infections of :—										
1. Less than one year's standing ..	138	68	8	..	518	90	169	65	833	223
2. More „ „ „ „ ..	63	20	..	..	34	4	..	..	97	24
TOTAL—Items (a), (b) and (c) ..	1,161	455	10	1	1,520	262	169	65	2,860	783
(d) Number of cases included in Item (c) known to have received previous treatment at other centres for the same infection	25	3	..	..	26	9	..	..	51	12
Number of cases which ceased to attend—										
(a) before completing the first course of treatment for .. .. .	76	43	1	..	167	26	..	..	244	69
(b) after one or more courses but before completion of treatment for ..	44	29	..	..	..	..	..	..	44	29
(c) after completion of treatment, but before final tests as to cure of ..	33	35	..	..	219	54	..	..	252	89
Number of cases transferred to other treatment centres after treatment for ..	10	6	..	..	13	3	..	..	23	9
Number of cases discharged after completion of treatment and observation for ..	4	2	..	..	140	22	..	..	144	24
Number of cases which, at the end of the year under report, were under treatment or observation for .. .. .	994	340	9	1	981	157	..	..	1,984	497
TOTAL .. .. .	1,161	455	10	1	1,520	262	..	..	2,691	718
Out-patient attendances—										
(a) For individual attention by the medical officer.. .. .	3,995	2,720	17	..	7,276	1,499	586	219	11,874	4,438
(b) For intermediate treatment, e.g., irrigation, dressings, etc. .. .. .	33	173	3	..	33,679	6,957	..	..	33,715	713
TOTAL ATTENDANCES .. .. .	4,028	2,893	20	..	40,955	8,456	586	219	45,589	11,568
Aggregate number of “in-patient days” of treatment given to persons who were suffering from .. .. .	379	658	..	..	931	1,585	..	..	1,310	2,243

# Venereal Disease Clinic.

## Pathological Examinations.

	For detection of			For Wassermann Reaction
	Spirochetes	Gonococc.,	Other Organisms.	
Examinations of pathological material :—				
(a) Specimens which were examined at, and by the medical officer of, the treatment centre ..	74	—	—	—
(b) Specimens from persons attending at the treatment centres which were sent for examination to an approved laboratory .. .. .	—	2,841	76	1,834

## No. of attendances from each area.

Name of county or county borough (or country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings.	Bristol	Somerset	Gloucestershire	Wiltshire	Gloucestershire	Monmouthshire	Bath	Essex	London	Birmingham	Durham	Worcestershire	Other Counties	Total
A. Number of cases from each area dealt with during the year for the first time and found to be suffering from :—														
Syphilis .. .. .	249	13	15	2	1	1	..	..	4	1	1	1	1	289
Soft chancre .. .. .	7	1	..	..	..	..	..	..	..	..	..	..	19	2
Gonorrhoea .. .. .	536	30	32	3	4	2	..	3	11	4	1	1	1	646
Conditions other than venereal ..	198	15	13	1	..	1	3	..	..	..	..	..	3	234
Total .. .. .	990	59	60	6	5	4	3	3	15	5	2	2	23	1,177
B. Total number of attendances of all patients residing in each area ..	55,787	520	569	42	11	32	11	7	23	20	22	18	95	57,157
C. Aggregate number of "in-patient days" of all patients residing in each area ..	2,447	276	261	319	..	..	..	..	..	..	95	155	..	3,553
D. Number of doses of arsenobenzol compounds given in the :—	3,832	120	103	13	2	2	4	1	7	10	..	..	15	4,109
1. Out-patient clinic .. .. .														
2. In-patient dept. to patients residing in each area.	74	22	37	4	..	..	..	..	..	..	7	4	..	148

## APPENDIX.

*Compiled from figures supplied by Registrar General.*

## VITAL STATISTICS.

Extracts for Calendar Year, 1930.

1929		1930
	LIVE BIRTHS.	
3,026	Legitimate males ... ..	3,076
2,871	" females ... ..	2,862
97	Illegitimate males ... ..	122
101	" females ... ..	97
6,095	TOTAL ... ..	6,157
15.58	Birth rate ... ..	15.73
	STILLBIRTHS.	
151	Legitimate males ... ..	121
111	" females... ..	108
6	Illegitimate males ... ..	4
8	" females... ..	3
276	Total ... ..	236
43.3	Rate per 1,000 total births... ..	36.9
	DEATHS.	
5,072	Total ... ..	4,470
12.9	Death rate ... ..	11.43
12	Maternal deaths from sepsis ... ..	8
15	Other causes ... ..	14
	<i>Infantile mortality rate per 1,000 live births :</i>	
58	Legitimate ... ..	55.7
121	Illegitimate ... ..	105
60	Total ... ..	57.5
1	Deaths from measles (all ages) ... ..	48
37	" whooping cough (all ages) ... ..	22
27	" diarrhoea (under 2 years of age) ... ..	26

*Supplied by the Registrar General.*

## Birth-rate, Death-rate, and Analysis of Mortality during the year 1930, Compared with England and Wales and 6 large cities.

*(Provisional figures. The rates for England and Wales have been calculated on a population estimated to the middle of 1930, but those for the towns have been calculated on populations estimated to the middle of 1929. The mortality rates refer to the whole population as regards England and Wales, but only to civilians as regards London and the groups of towns).*

	RATE PER 1,000 TOTAL POPULATION		ANNUAL DEATH-RATE PER 1,000 POPULATION.								RATE PER 1,000 LIVE BIRTHS.		PERCENTAGE OF TOTAL DEATHS.					
	Live Births	Still-Births	All Causes	Enteric fever.	Small-pox	Measles	Scarlet fever	Whooping cough	Diphtheria	Influenza	Violence	Diarrhoea and enteritis (under two years)	Total deaths under one year	Certified by registered medical practitioners	Inquest cases.	Certified by coroner after P.M.	No inquest	Uncertified causes of death
England and Wales .. .. .	16.3	0.69	11.4	0.01	0.00	0.10	0.02	0.05	0.09	0.12	0.55	6.0	60	90.4	6.9	1.7	1.0	
107 County boroughs and great towns, including London .. .. .	16.6	0.71	11.5	0.01	0.00	0.15	0.02	0.05	0.10	0.11	0.50	8.3	64	90.6	6.6	2.3	0.5	
159* Smaller towns (1921 adjusted populations 20,000—50,000) ..	16.2	0.69	10.5	0.00	0.00	0.08	0.01	0.05	0.07	0.13	0.43	4.4	55	91.8	5.9	1.2	1.1	
London .. .. .	15.7	0.56	11.4	0.01	0.00	0.23	0.02	0.03	0.10	0.08	0.55	9.9	59	88.3	7.4	4.3	0.0	
Birmingham .. .. .	17.8	..	10.8	..	..	0.06	0.02	0.11	0.10	0.13	..	9.7	62	..	..	..	..	
Liverpool .. .. .	21.7	..	12.7	..	..	0.21	0.04	0.08	0.26	0.09	..	14.0	81	..	..	..	..	
Manchester .. .. .	17.2	..	12.8	..	..	0.19	0.02	0.05	0.08	0.17	..	12.6	78	..	..	..	..	
Sheffield .. .. .	15.1	..	10.6	..	..	0.13	0.02	0.06	0.04	0.10	..	6.3	66	..	..	..	..	
Leeds .. .. .	15.8	..	12.2	..	..	..	0.05	0.07	0.11	0.13	..	4.8	66	..	..	..	..	
Bristol .. .. .	15.7	0.60	11.2	0.00	0.00	0.14	0.01	0.06	0.11	0.07		4.0	59	92.73	7.08	0.15	0.04	

\* By the creation of Llŵchwr U.D. on the 1st April, 1930, and the extension of Sale U.D. on the 1st October, 1930, the number of smaller towns was increased to 159.



*Figures from Registrar General's Returns.*

**Births.**

YEAR	BRISTOL		ENGLAND and WALES.
	Number of Births.	Birth Rate.	
1881-1885	34,574	33.0	33.5
1886-1890	33,279	30.6	31.4
1891-1895	33,091	29.4	30.5
1896-1900	40,420	26.5	29.3
1901-1905	46,280	27.2	28.2
1906-1910	43,805	23.5	26.3
1911-1915	38,666	21.6	23.6
1916-1920	35,732	19.0	20.1
1921-1925	36,795	19.1	19.9
1926-1930	31,592	16.3	16.7
1918	6,015	15.9	17.7
1919	6,700	17.8	18.5
1920	9,602	25.4	25.5
1921	8,283	21.7	22.4
1922	7,495	19.5	20.4
1923	7,347	19.1	19.7
1924	6,940	18.0	18.8
1925	6,730	17.4	18.3
1926	6,676	17.4	17.8
1927	6,301	16.3	16.6
1928	6,363	16.3	16.7
1929	6,095	15.6	16.3
1930	6,157	15.7	16.3

*Compiled from figures supplied by Registrar General.*

**1930.**

**Principal Causes of Death during calendar year.**

Death Rate per 1,000	DISEASE.	Net deaths in 1930	% to total deaths
0.002	Enteric fever ... ..	1	0.02
—	Smallpox ... ..	—	—
0.12	Measles ... ..	48	1.07
0.008	Scarlet fever ... ..	3	0.07
0.06	Whooping cough ... ..	22	0.49
0.09	Diphtheria ... ..	39	0.87
0.07	Influenza ... ..	28	0.63
0.03	Encephalitis lethargica ... ..	12	0.27
0.01	Meningococcal meningitis ... ..	4	0.09
1.01	Tuberculosis of respiratory system	393	8.79
0.14	Other tuberculous diseases ... ..	57	1.28
1.52	Cancer, malignant disease ... ..	595	13.31
0.04	Rheumatic fever ... ..	15	0.34
0.16	Diabetes ... ..	64	1.43
0.64	Cerebral haemorrhage, etc. ....	250	5.59
2.39	Heart disease ... ..	933	20.87
0.39	Arterio sclerosis ... ..	154	3.45
0.38	Bronchitis ... ..	150	3.36
0.63	Pneumonia (all forms) ... ..	247	5.53
0.12	Other respiratory diseases ... ..	46	1.03
0.08	Ulcer of stomach or duodenum ... ..	30	0.67
0.09	Diarrhoea, etc. ... ..	35	0.78
0.07	Appendicitis ... ..	27	0.60
0.04	Cirrhosis of liver ... ..	14	0.31
0.47	Acute and chronic nephritis ... ..	182	4.07
0.02	Puerperal sepsis ... ..	8	0.18
0.04	Other accidents and diseases of pregnancy and parturition ... ..	14	0.31
0.43	Congenital debility and malforma- tion, premature birth ... ..	167	3.74
0.13	Suicide ... ..	51	1.14
0.35	Other deaths from violence ... ..	135	3.02
1.90	Other defined diseases ... ..	746	16.69
—	Causes ill-defined or unknown ... ..	—	—
11.43		4,470	100.00

**Causes of Death at Different Periods of Life in the County Borough of Bristol**  
during calendar year 1930.

CAUSES OF DEATH.		Sex.	All Ages.	0—	1—	2—	5—	15—	25—	45—	65—	75—
ALL CAUSES	...	M. F.	2,210 2,260	213 141	43 34	46 39	59 56	103 102	232 254	607 558	484 418	423 658
1 Enteric fever	...	M. F.	1 ...	...	...	...	...	...	...	1 ...	...	...
2 Small-pox	...	M. F.	...	...	...	...	...	...	...	...	...	...
3 Measles	...	M. F.	30 18	2 3	13 6	10 8	5 1	...	...	...	...	...
4 Scarlet fever	...	M. F.	1 2	...	...	...	...	1 ...	...	...	...	...
5 Whooping cough	...	M. F.	12 10	4 3	5 3	3 3	...	...	...	...	...	...
6 Diphtheria	...	M. F.	18 21	...	2 ...	6 5	10 16	...	...	...	...	...
7 Influenza	...	M. F.	12 16	...	...	...	...	...	3 2	5 4	1 2	3 7
8 Encephalitis lethargica	...	M. F.	5 7	...	...	...	...	...	1 3	...	...	1 ...
9 Meningococcal meningitis	...	M. F.	1 3	1 1	...	...	...	...	...	...	...	...
10 Tuberculosis of respiratory system	...	M. F.	214 179	...	...	...	...	1 46	94 88	62 33	13 7	3 2
11 Other tuberculous diseases	...	M. F.	25 32	...	5 1	3 5	5 5	4 8	3 8	4 4	1 ...	...
12 Cancer, malignant disease	...	M. F.	279 316	...	...	...	...	1 ...	2 37	116 128	107 91	43 58
13 Rheumatic fever	...	M. F.	6 10	...	...	...	...	1 4	1 ...	...	...	...
14 Diabetes	...	M. F.	21 43	...	...	...	...	...	2 2	10 13	5 14	4 12
15 Cerebral haemorrhage, &c.	...	M. F.	103 147	...	...	...	...	1 ...	1 4	19 44	50 38	32 61
16 Heart disease	...	M. F.	409 524	...	...	...	...	2 6	24 25	124 113	130 126	123 246
17 Arterio-sclerosis	...	M. F.	80 74	...	...	...	...	...	...	16 19	33 23	31 31
18 Bronchitis	...	M. F.	72 78	8 8	...	3 ...	...	...	2 ...	13 9	16 15	30 43
19 Pneumonia (all forms)	...	M. F.	138 109	38 38	11 8	8 6	4 ...	10 3	14 12	30 16	14 8	9 18
20 Other respiratory diseases	...	M. F.	31 15	...	1 1	1 ...	...	3 2	7 3	11 4	5 1	2 4
21 Ulcer of stomach or duodenum	...	M. F.	20 10	...	...	...	...	...	4 ...	15 5	1 2	...
22 Diarrhoea, &c.	...	M. F.	18 17	12 7	4 3	...	...	...	1 ...	1 1	...	...
23 Appendicitis and typhilitis	...	M. F.	12 15	...	...	...	1 4	4 1	2 1	4 6	1 1	...
24 Cirrhosis of liver	...	M. F.	9 5	...	...	...	...	...	...	7 3	...	2 2
25 Acute and chronic nephritis	...	M. F.	94 88	...	...	1 ...	4 1	2 2	6 7	43 34	24 28	14 16
26 Puerperal sepsis	...	M. F.	...	...	...	...	...	...	...	...	...	...
27 Other accidents and diseases of pregnancy and parturition	...	M. F.	...	...	...	...	...	...	...	...	...	...
28 Congenital debility and malformation, premature birth	...	M. F.	108 59	...	...	...	1 ...	...	...	1 ...	...	...
29 Suicide	...	M. F.	26 25	...	...	...	...	1 5	7 8	12 10	5 1	1 1
30 Other deaths from violence	...	M. F.	82 53	3 2	1 3	5 2	13 5	11 1	15 3	14 9	5 7	16 21
31 Other defined diseases...	...	M. F.	384 362	39 23	1 4	6 2	10 8	13 16	34 30	98 99	73 52	110 128
32 Causes ill-defined or unknown	...	M. F.	...	...	...	...	...	...	...	...	...	...

## NET INFANT DEATHS, 1929..

1929	NET INFANT DEATHS, 1929..			Rate	
Total	Males	Females	Total	Rate	
340	196	135	331	65.7 per 1,000 legitimate births.	
24	17	6	23	105.0 per 1,000 illegitimate births.	
364	213	141	354	57.5 per 1,000 births.	
	TOTAL				





*Compiled from figures supplied by Registrar General.*

CITY AND COUNTY OF BRISTOL.

**Population, Births, Deaths, Natural Increase, Infant Mortality,  
Maternal Mortality, for Calendar Year 1930 and previous years.**

	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921
<b>Estimated population (mid year)</b>										
For birth rate .. ..	391,335	391,300	390,700	386,000	383,600	386,000	386,400	385,600	383,900	381,700
For death rate .. ..	391,035	391,000	390,400	385,700	383,300	385,700	386,200			
<b>Births.</b>										
Legitimate—males .. ..	3,076	3,026	3,154	3,146	3,344	3,377	3,441	3,679	3,722	4,105
females .. ..	2,862	2,871	2,980	2,908	3,135	3,165	3,287	3,447	3,545	3,900
Illegitimate—males .. ..	122	97	115	128	104	96	103	107	116	140
females .. ..	97	101	114	119	93	92	109	114	112	138
Total .. ..	6,157	6,095	6,363	6,301	6,676	6,730	6,940	7,347	7,495	8,283
Rate per 1,000 living ..	15.7	15.6	16.3	16.3	17.4	17.4	18.0	19.1	19.5	21.7
<b>Deaths.</b>										
Males .. ..	2,210	2,466	2,202	2,327	2,226	2,554	2,322	2,097	2,311	2,105
Females .. ..	2,260	2,606	2,300	2,468	2,193	2,628	2,379	2,274	2,616	2,125
Total .. ..	4,470	5,072	4,502	4,795	4,419	5,182	4,701	4,371	4,927	4,230
Rate per 1,000 population	11.4	12.9	11.5	12.4	11.5	13.4	12.2	11.3	12.8	11.1
<b>Deaths under 1 year.</b>										
Legitimate .. ..	331	340	354	340	439	470	467	434	513	505
Rate per 1,000 births ..	56	58	58	56	68	72	69	61	71	63
Illegitimate .. ..	23	24	21	23	30	41	26	22	28	43
Rate per 1,000 births ..	105	121	92	93	152	218	123	100	123	155
Total deaths .. ..	354	364	375	363	469	511	493	456	541	548
Rate per 1,000 births ..	57	60	59	58	70	76	71	62	72	66
<b>Natural increase per 1,000 population .. ..</b>	4.3	2.6	4.8	3.9	5.9	4.0	5.8	7.8	6.7	10.6
<b>Diarrhoea and Enteritis— (under two years)</b>										
Deaths .. ..	26	27	30	29	38	59	40	59	51	86
Rate per 1,000 births ..	4.22	4.43	4.71	4.60	5.69	8.77	5.76	8.03	5.47	10.38
<b>Childbirth (Mothers).</b>										
Deaths .. ..	14	15	11	11	10	13	19	18	14	19
Rate per 1,000 births ..	2.27	2.46	1.73	1.75	1.50	1.93	2.74	2.45	1.87	2.29
<b>Puerperal Fever.</b>										
Deaths .. ..	8	12	3	8	13	23	8	6	7	5
Rate per 1,000 births ..	1.30	1.97	0.47	1.27	1.95	3.42	1.15	0.82	0.93	0.60
<b>Marriages.</b>										
Number .. ..	3,320	3,197	3,059	3,071	2,845	3,012	2,924	2,997	3,181	3,282
Rate per 1,000 population	16.9	16.3	15.7	15.9	14.8	15.6	15.1	15.5	16.3	17.2

*Figures from Registrar General's Returns.*

### Deaths.

YEAR	BRISTOL		ENGLAND and WALES.
	Number of deaths.	Death rate.	
1881-1885	20,168	19.2	19.4
1886-1890	21,164	19.5	18.9
1891-1895	21,199	18.8	18.7
1896-1900	24,630	16.1	17.7
1901-1905	26,609	15.6	16.0
1906-1910	24,818	13.3	14.7
1911-1915	25,367	14.1	14.3
1916-1920	24,747	14.1	14.4
1921-1925	23,411	12.2	12.2
1926-1930	23,258	11.9	12.1
1918	5,795	17.1	17.3
1919	4,830	13.4	14.0
1920	4,430	11.7	12.4
1921	4,230	11.1	12.1
1922	4,927	12.8	12.8
1923	4,371	11.3	11.6
1924	4,701	12.2	12.2
1925	5,182	13.4	12.2
1926	4,419	11.5	11.6
1927	4,795	12.4	12.3
1928	4,502	11.5	11.7
1929	5,072	12.9	13.4
1930	4,470	11.4	11.4

*Figures from Registrar General's Returns.*

### Infant Mortality.

YEAR	BRISTOL.		ENGLAND and WALES
	Number of deaths under one year	Rate per 1,000 births	
1881-1885	4,858	140	139
1886-1890	4,789	144	145
1891-1895	4,767	144	151
1896-1900	6,000	148	156
1901-1905	5,863	127	138
1906-1910	4,804	110	117
1911-1915	4,293	111	110
1916-1920	3,076	86	90
1921-1925	2,549	69	76
1926-1930	1,925	61	68
1918	551	92	97
1919	558	83	89
1920	665	69	80
1921	548	66	83
1922	541	72	77
1923	456	62	69
1924	493	71	75
1925	511	76	75
1926	469	70	70
1927	363	58	70
1928	375	59	65
1929	364	60	74
1930	354	57	60

*Compiled from figures supplied by Registrar General.*

**Maternal Mortality.**

YEAR	PUERPERAL SEPSIS			OTHER PUERPERAL CAUSES.			ALL CAUSES.		
	BRISTOL		ENGLAND AND WALES.	BRISTOL		ENGLAND AND WALES.	BRISTOL		ENGLAND AND WALES
	Number of deaths	Rate per 1,000 births		Number of deaths	Rate per 1,000 births		Number of deaths	Rate per 1,000 births	
1891-1895	67	2.02	2.60	102	3.08	2.89	169	5.11	5.49
1896-1900	69	1.71	2.12	89	2.20	2.57	158	3.91	4.69
1901-1905	70	1.51	1.95	155	3.35	2.32	225	4.86	4.27
1906-1910	63	1.44	1.56	90	2.05	2.18	153	3.49	3.74
1911-1915	56	1.45	1.42	97	2.51	2.61	153	3.96	4.03
1916-1920	51	1.43	1.51	79	2.21	2.61	130	3.64	4.12
1921-1925	49	1.33	1.40	83	2.26	2.50	132	3.59	3.90
1926-1930	44	1.39	..	61	1.93	..	105	3.32	..
1918	10	1.66	1.28	19	3.16	2.51	29	4.82	3.79
1919	5	0.74	1.67	12	1.79	2.70	17	2.53	4.37
1920	21	2.18	1.81	17	1.77	2.52	38	3.95	4.33
1921	5	0.60	1.38	19	2.29	2.53	24	2.89	3.91
1922	7	0.93	1.38	14	1.87	2.43	21	2.80	3.81
1923	6	0.82	1.30	18	2.45	2.51	24	3.27	3.81
1924	8	1.15	1.39	19	2.74	2.51	27	3.89	3.90
1925	23	3.42	1.56	13	1.93	2.52	36	5.35	4.08
1926	13	1.95	1.60	10	1.50	2.52	23	3.45	4.12
1927	8	1.27	1.57	11	1.75	2.54	19	3.02	4.11
1928	3	0.47	1.79	11	1.73	2.63	14	2.20	4.42
1929	12	1.97	1.80	15	2.46	2.53	27	4.43	4.33
1930	8	1.30	..	14	2.27	..	22	3.57	..

## ANALYTICAL DATA (Chemical and Bacteriological) OF CITY WATER SUPPLY.

Number of sample ... ..	2	6	9	16	22	29	33
	11 February.	25 March.	25 April.	25 July.	23 September.	22 October.	29 December.
Place of collection...	Tap in laboratory	Tap in laboratory	Tap in laboratory	Tap in laboratory	Tap in laboratory	Tap in laboratory	Tap in laboratory
Physical appearance	Clear, bright, neutral to litmus. No smell on heating solids.	Clear, bright, neutral to litmus. No smell on heating solids.	Clear, bright, neutral to litmus. No smell on heating solids.	Clear, bright, neutral to litmus. No smell on heating solids.	Clear, bright, neutral to litmus. No smell on heating solids.	Clear, bright, neutral to litmus. No smell on heating solids.	Clear, bright, neutral to litmus. No smell on heating solids.
Remarks on solids ... ..	...	...	...	...	...	...	...
Oxygen absorbed	Parts per 100,000.	Parts per 100,000.	Parts per 100,000.	Parts per 100,000.	Parts per 100,000.	Parts per 100,000.	Parts per 100,000.
	Grains per gallon.	Grains per gallon.	Grains per gallon.	Grains per gallon.	Grains per gallon.	Grains per gallon.	Grains per gallon.
Free ammonia...	.03	.02	.017	.020	—	.019	.021
Albuminoid ammonia	nil	traces	nil	nil	traces	nil	nil
Nitrogen in nitrates	.005	.0035	.005	.006	.009	.006	.0042
Chlorine as chlorides	.14	.09	.16	.90	.10	.085	.15
Total hardness	1.21	.85	1.29	1.21	1.36	1.29	1.36
Permanent hardness	14.4°	15.2°	15.6°	12.2°	10.8°	12.4°	14.8°
Temporary hardness	5.5°	4.4°	3.8°	4.1°	4.1°	4.0°	5.4°
Total solids	8.9°	10.8°	11.8°	8.1°	6.7°	8.4°	9.4°
Mineral matter	29.5	20.7	30.35	28.6	24.6	25.4	31.5
Loss on ignition	25.3	17.7	27.0	23.3	21.9	22.7	26.5
Nitrites	4.2	3.0	3.35	5.3	2.7	2.7	5.0
Colonies per cc on gelatine at 22°C	nil	nil	nil	nil	nil	nil	nil
Colonies on agar at 37°C	4	6	34	12	34	57	12
MacConkey's bile salt broth (B. coli test) 25 cc water used	+1 liquefier	+1 liquefier	+3 liquefiers	+2 liquefiers	+4 liquefiers	+9 liquefiers	+2 liquefiers
Gas:	—	—	—	—	+	—	—
Acidity:	—	+	+	+	+	+	+









## CITY AND COUNTY OF BRISTOL (INCLUDING PORT CASES).

Showing the number of Cases of Infectious Disease notified under the Infectious Disease Notification Act, 1889, since its adoption in 1890, and cases of Tuberculosis notified under the Tuberculosis Regulations.

[illegible]





## COSTING RETURNS, 1930-31.

Statement showing the average cost per patient per week of the treatment of patients.

ITEMS.	SOUTHMEAD HOSPITAL.		HAM GREEN HOSPITAL.		NOVERS HILL HOSPITAL		HAM GREEN SANATORIUM		FRENCHAY PARK SANAT'M		CHILDREN'S HOMES	
	Gross total cost £	Average cost per patient per week in pence d.	Gross total cost £	Average cost per patient per week in pence d.	Gross total cost £	Average cost per patient per week in pence d.	Gross total cost £	Average cost per patient per week in pence d.	Gross total cost £	Average cost per patient per week in pence d.	Gross total cost £	Average cost per patient per week in pence d.
Salaries, wages, uniforms & dresses of staff, etc.:												
(a) Medical staff ... ..	1,881	13.47	1,338	38.81	119	16.63	645	23.78	288	39.38	23	.36
(b) Matron and nursing staff ... ..	5,044	36.12	3,332	96.64	682	95.33	1,718	63.35	352	48.14	337	5.23
(c) Other staff ... ..	12,968	92.86	3,705	107.45	1,260	176.13	1,849	68.18	1,068	146.05	3,736	57.98
(d) Council's contributions to superannuation fund ... ..	1,423	10.19	866	25.12	150	20.97	153	5.64	120	16.41	478	7.42
(e) Employers' contributions in respect of National Health and Pensions and Unemployment Insurance ... ..	...	...	...	...	...	...	...	...	...	...	92	1.43
Provisions for patients and staff ... ..	13,869	99.31	5,876	170.41	979	136.85	5,392	198.81	850	46.24	3,980	61.77
Drugs and medical and surgical appliances ... ..	2,449	17.53	1,277	37.04	26	3.63	1,005	37.06	17	.232	56	.87
Clothing of inmates ... ..	...	...	...	...	...	...	...	...	...	...	1,474	22.87
Superannuation allowances under the Poor Law Acts ... ..	...	...	...	...	...	...	...	...	...	...	695	10.78
Fuel, light, water and laundry, wages of laundry staff and cost of laundry materials	4,423	31.67	2,660	77.15	530	74.08	1,852	68.29	523	71.52	1,624	25.20
Domestic renewals, repairs and additions ... ..	2,050	14.68	911	26.42	214	29.91	439	16.19	111	15.18	730	11.33
Structural additions, alterations, renewals, repairs and painting ... ..	3,666	26.25	3,260	94.55	218	30.47	1,572	57.96	811	110.91	2,723	42.26
Ambulance and other transport ... ..	201	1.44	12	.35	65	9.08	137	5.05	75	10.25	507	7.87
Expenditure on farm and garden ... ..	...	...	147	4.25	...	...	147	5.42	786	107.49	...	...
Miscellaneous expenditure ... ..	1,964	14.06	543	15.75	255	35.64	396	14.60	123	16.82	651	10.10
Rent, rates (excluding water rates, taxes and insurance), etc. ... ..	1,158	8.29	779	22.59	141	19.71	376	13.86	170	23.25	866	13.44
Loan charges ... ..	5,408	38.73	4,809	139.48	648	90.58	2,319	85.51	2,167	296.34	1,307	20.28
GRAND TOTALS ... ..	56,504	404.60	29,515	856.01	5,287	739.01	18,000	663.70	7,461	1020.30	19,279	299.19
Deduct.—Income other than income in respect of the treatment of patients, viz. :—												
(a) Income from farm and garden ... ..	...	...	...	...	...	...	...	...	...	...	...	...
(b) Other income, including sale of garden produce where no separate farm and garden accounts ... ..	1,335	9.56	900	26.10	217	30.33	434	16.00	122	16.68	495	7.68
NET TOTALS ... ..	55,169	395.04	28,615	829.91	5,070	708.68	17,566	647.70	7,339	1003.62	18,784	291.51
	Whole institution.		Whole institution.		Whole institution.		Whole institution.		Whole institution.		Whole institution.	
Average number of beds, excluding cots in maternity wards ... ..	672		266		60		136		35		397	
Average number of beds excluding cots in maternity wards occupied ... ..	642		158.7		32.9		124.8		33.69		298	
By medical cases ... ..	487		...		...		...		...		...	
By surgical cases ... ..	139		...		...		...		...		...	
By maternity cases ... ..	25		...		...		...		...		...	
Number of patient days during the year ... ..	234,620		57,926		12,017		45,565		12,285		108,254	
Number of days in the year during which the institution was open ... ..	365		365		365		365		365		365	
Number of patients discharged or died during the year ... ..	3,277		2,042		648		...		...		...	
Classification of cases—												
Observation and pulmonary ... ..	...		...		...		93.16%		71.05%		...	
Non-pulmonary ... ..	...		...		...		6.83%		28.95%		...	
Number of operations excluding dental operations performed under a general anaesthetic	232		82		...		...		...		...	
Average percentage of bed cases during year ... ..	25.3		...		...		...		25		...	





